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OIL WEEKLY

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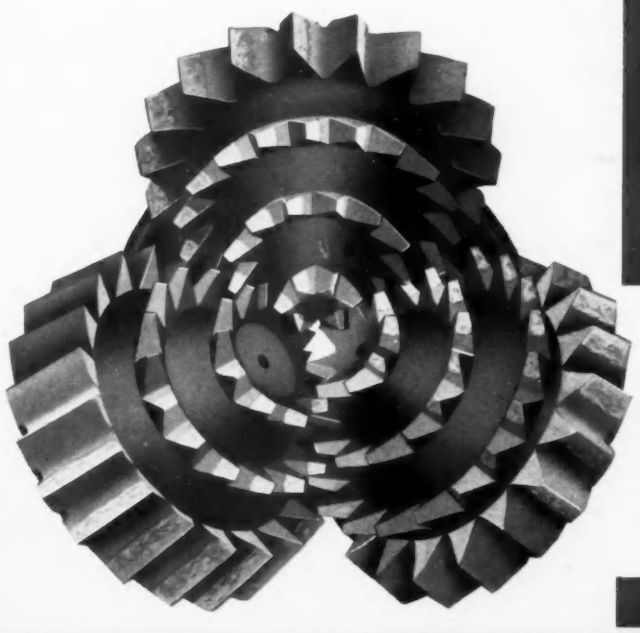

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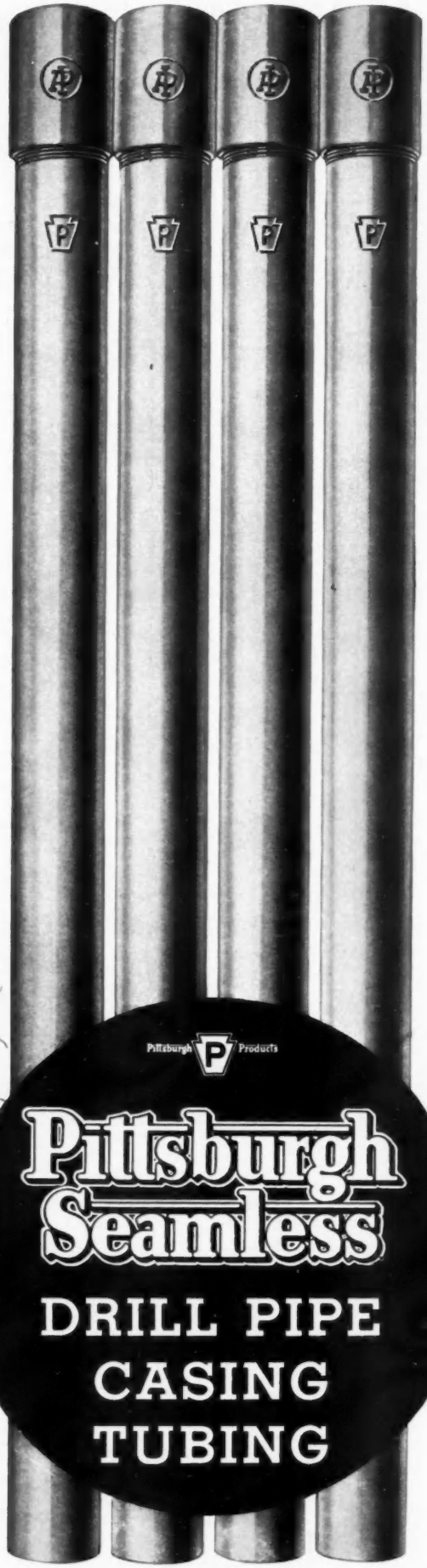

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ENGINEERING « STATISTICS » THE WEEK'S NEWS

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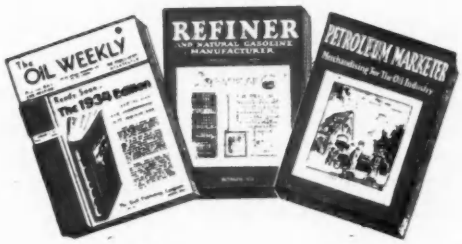

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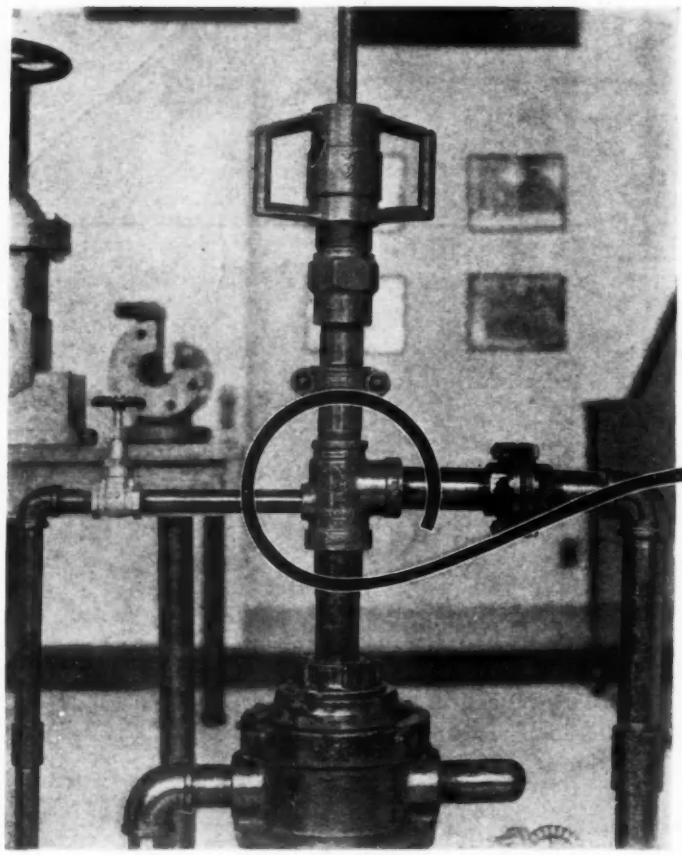

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THE OIL WEEKLY

FOR OIL AND GAS PRODUCTION AND
PIPE LINE DIVISIONS

ENGINEERING • NEWS • STATISTICS

The Congressional Investigation

R. L. DUDLEY

THE oil industry is fortunate in the personnel of the Congressional Investigating Committee, which has been touring the oil country "feeling the pulse" of the industry preliminary to making a report that may be used for guidance at a coming session of Congress, when the Ickes federal control bill will come up again.

That the bill, known in the House as the Disney bill, but known to the industry as the Ickes bill, will come up seems inevitable.

It has been our pleasure to meet members of the committee conducting the investigation, and we are impressed with the men on it, their evident desire to get to the facts in the case, their willingness to listen, their eagerness to learn what it is all about.

It is a pity that there is any occasion for the trip, and it is a pity that conflicting stories are coming daily from honest men whose interests, as we see it, are common.

The committee has formed no opinions yet released for publication. It is unlikely that such opinions will be released until the committee makes its report to the body that appointed it. The men on the committee appear to be fair, intelligent, experienced in matters of this kind, and the fact that they are not from states pre-eminently oil producing states really works in their favor.

To us it appears that the principal thing the committee is getting is an impression that there are deeply conflicting currents within the oil industry. And that is a true picture!

Plain Talk

FOR a number of years we have observed that when major companies are making money the independent companies, and the small companies, are making money. That is not surprising because in the final analysis a fair price for the crude and the refined products is the basis of prosperity. We have noted conversely that when the major companies lose money the smaller companies lose money. We hear now that the refining departments of the major companies are losing money, but we are not hearing any general cry about the balance sheets of major companies as a whole showing red for the first quarter or first half of the year. And certainly the smaller producer is in better shape than he has been for some time. It will be indeed a remarkable day when every company, regardless of its properties and its management makes money, a day which probably will never come.

To us, even in the face of an undoubtedly high quantity of "hot oil," the situation does not appear hopeless.

It seems to us that there has been too much of the attitude that the oil industry will go to hell unless the pet plan of this major or that independent is accepted for the nation as a whole. To us it seems that majors and independents are getting dangerously near the frame of mind of the two small boys who had fought and fought on every occasion until they really did not need a reason.

We are sympathetic with the company that feels the Ickes bill is a step toward usurpation of private rights

in favor of federal management. As a matter of governmental or industrial principal we think it is wrong. We believe that most of those companies supporting it have exactly the same viewpoint. We think that most of them really heaved a sigh of relief when Congress adjourned without passing it. We believe it is but an entering wedge for a new era—a dangerous one that would ultimately affect other industries as well as the oil industry if the bill passes.

But we believe Secretary Ickes is honest in his opinion, but somewhat hysterical in his picture of what will happen if his particular measure does not pass. We think that if present laws are enforced the situation can be handled.

We deprecate the failure of the Texas Railroad Commission to do what we believe to be its duty. We think that the commissioners have played politics up to the hilt. We like the members of the commission personally, believe they are honest, but believe they are making the state a bad commission.

But we believe, also, that the Texas Railroad Commission is not solely to blame. We believe that the attorney general of Texas is as derelict in his duty as the commission has been. We believe the situation in East Texas is moving rapidly into an era of downright thievery rather than simple violation of a proration order. And we believe that that comes under the head of the business of the people of the state. (We are talking particularly of Texas because this state happens to be the cancer spot of "hot oil" affecting the industry nationally and internationally.) We believe that if the present duly constituted officers of Texas do not do their duty and help to enforce the laws in East Texas they, as well as the oil industry, will pay the penalty for this failure. We believe the new federal mill tax will help to stamp out a lot of the law violations in East Texas and we would like to see an effort along this line given a genuine trial before we raise the white flag and say that a bureau in Washington is the only Moses left.

We think that the bitterness which has been engendered by the Ickes bill is a real menace to the oil industry. We believe the public is sick and tired of the continual squabbling between factions in the oil industry, each of which claims it is being put out of business when the casual onlooker can see with the naked eye that both factions have more of the comforts of life than are enjoyed by the principals of 99 other industries that have not cried to Washington for succor.

We believe that if the Ickes bill comes up again we shall see with it as an amendment the pipe line divorcement bill which has been conceived in prejudice and nurtured in hatred. There undoubtedly are many who feel that the profits of pipe line companies are too high, and there may be instances to support the argument, but we believe sane thinking would convince a fair-minded proponent of the divorcement plan that there are ways out of the dilemma other than to cut off the nose to spite the face. If pipe lines are not common carriers in fact as well as in name, cure that. Do not take steps that will ruin pipe line construction in the future when the industry may need it badly.

The casual reader of this editorial will doubtless get the idea that THE OIL WEEKLY is picking a quarrel with all elements within the industry. We learned a long time ago that a person expressing an opinion can not please every body with it and if this editorial seems to be a blanket criticism it is because we think a blanket criticism is deserved, and not because we have any axes to grind. We carry only one axe—that is for the common foe of our industry. When factional fights within the industry affect the industry more than a common foe we are tempted to do a little hacking here and there among our own friends.

Have we any ideas except to hand out criticism? We certainly have.

The first suggestion is to stop this senseless fight. It will get the industry no where. The second is to keep our feet on the ground and do more work for the common good. Resigning from an organization formed to help the industry will not help. Supporting a fight at Austin for an appointive commission at this moment when the cards are stacked will only cause the feeling within the industry to flare up again. Use some common sense. Concentrate on the man who is at the bottom of this trouble—the real "hot oil" man.

I have in mind four men, prominent in the oil industry, and each prominent in the several fights that have taken place within the industry during the past few years. Each is honest—a good citizen. None of them is of the type that is really causing the trouble for them all. But these four men, typical of the industry in which they are leaders, are spending all their time, and much money, fighting among themselves. And privately, we believe that every one of the four will agree that it is damfoolishness.

The Oil Man's Calendar

AUGUST

24-27 *Drake Well Memorial Celebration, Titusville, Pennsylvania.*

SEPTEMBER

10-14 *American Chemical Society, Cleveland, Ohio.*

19-21 *National Petroleum Association, Atlantic City, New Jersey.*

OCTOBER

1-5 *National Safety Council and American Society of Safety Engineers, Cleveland, Ohio.*

12-13 *A. I. M. E. Petroleum Division, Tulsa, Oklahoma.*

29 *American Gas Association, Atlantic City, New Jersey.*

NOVEMBER

12-15 *American Petroleum Institute, Dallas, Texas.*
American Association of Petroleum Geologists (Pacific Section), Los Angeles.

Oil Investigations Multiply

Three important inquiries started or scheduled in past few weeks. Congressional committee considers advisability of stronger federal oil law. Employment, wages, and working conditions under code are surveyed. Higher fuel oil prices will be investigated. Gasoline market continues improving. Financial results generally favorable in first half of 1934, and outlook is promising for latter half.

JACK LOGAN
Associate Editor

THE petroleum industry is easily a leader in attracting investigations. In only the past few weeks at least three important investigations have been launched or planned. All are government investigations, and their ultimate aims are to determine whether or not the federal government should assume additional, stricter, or more permanent control over the industry.

Most widely heralded of the investigations is that of the congressional subcommittee, first installment of which was completed last week. Charged with the responsibility of determining whether or not a new federal oil law is needed in lieu of the shaky oil code setup, five congressmen unfamiliar with the oil business sallied into Oklahoma and Texas to solve a question over which veteran oil men had puzzled, brooded, and clamored. So that the investigation would be impartial, only men unacquainted with oil had been placed on the inquisitorial committee.

At Oklahoma City the neophytes were shown how "hot oil merchants" market their wares through cunningly contrived by-passes. Oklahomans in some instances favor a stricter oil control law because it is aimed primarily at firmer throttling of the East Texas field. In Texas, where there was much opposition to the Thomas-Disney oil bill, those who had fought the legislation made the most of their opportunities. Members of the Texas Railroad Commission, bitter antagonists of stronger federal oil control, feted the investigating committee. At Houston, independent oil men who had protested against the Thomas-Disney bill were conspicuous among those escorting the committee around, and much was said about how the oil business had not gone to the dogs upon failure of the bill, as proponents had said it would do. The committee also inspected several of the 13,850 wells in the East Texas field, traversed a few of the countless roads in the 40-mile long by eight-mile wide field, and talked with some of the 2000 or so well owners there, before adjourning for the more pressing business of political maneuvering for summer elections.

The committee proposes to resume investigations in September, when witnesses and evidence will be heard, to adjourn again for the more important business of participating in the political activities preceding the November general election, and finally to investigate some more after the November election. The committee will thus have done much, if intermittent, investigating by the time Congress convenes in January.

What Can Committee Advise?

Just what the committee will be able to recommend after its investigation was a subject of satirical comment in the House when the lawmakers were asked to authorize the inquiry. It was stated in effect that the committee would probably be able to report no more than Congress already knew.

But even as the political expediency that it represented, the investigation was apparently looked upon by the House as worth the $25,000 finally provided for conducting it. For it gracefully delayed until after elections a congressional showdown on a highly controversial issue, keeping both sides more or less happy.

As to actual results to be expected from the investgation, it appears that the Washington satirists were rather adroit marksmen. For there are after all only two conclusions that the committee can reach: (1) that the proposed legislation is needed, or (2) that the legislation is not needed. And irrespective of the subcommittee's conclusion, Oil Administrator Ickes and other advocates of stronger oil control can be counted upon to force the matter to a vote in the next Congress.

Code Investigation Undertaken

Second of the recently scheduled oil investigations is that just started by the Bureau of Labor Statistics to determine effects of the oil code on employment,

wages, and working conditions in the industry. The survey will cover all branches of the industry: production, pipe line, refining, and marketing. The oil code administration sponsored the survey and will help carry it out. The oil code authorities apparently hope that the investigation will furnish argument for perpetuating the code regulations in a permanent federal oil control law.

High Fuel Oil Prices Examined

The third oil investigation of the present is that ordered last week by Secretary Ickes into current relatively high prices for fuel and heating oils. Consumers have protested against rising prices for those oils, and have charged that oil companies under code provisions have engaged in monopolistic practices. On July 30 the code administration's petroleum administrative board will hold a hearing to consider specific charges in the matter.

Although generating public protests which may ultimately tend to invite government regulation of oil company earnings, the fuel oil situation demonstrates what controlled supplies of oils can do for prices and profits. The present prices are the best since the middle of 1930 and are more than double the "lows" reached in 1931 and 1932, having risen particularly during the past six months as fuel oil and gas oil stocks came down 20 percent, to reach the lowest levels for 10 years. In eight months beginning October 1, 1933, United States gas oil and fuel oil stocks dropped 28,000,000 barrels, or to about 103,000,000 barrels, with 20,000,000 barrels of the reduction occurring in California.

Largely responsible for the declining stocks has been the successful curtailment of crude oil production since last fall—despite all the talk about "hot" oil and "overproduction" and the alarmists' exhortations for more and better oil laws. When there is real overproduction there is not a situation in which crude oil stocks remain stationary and gas and fuel oil stocks come down sharply.

Contributing also to improvement of the fuel oil situation have been at least two other important factors. One of them has been the pronounced revival of industrial activity since the spring of 1933, and another related factor has been the large expansion of navigation, involving high demand for bunker fuel oil. Government limitation of imports has kept foreign oils from coming in meanwhile to interfere with the declining stocks and rising prices.

Gasoline Prices Higher

Gasoline prices are still safe by considerable margin from arousing complaints among the consumers. But they continued on the up grade last week, leaving at more comfortable distance the money-losing quotations that prevailed in the latter half of June and the early part of July. Improvement which had previously gotten under way in East Texas continued there and also spread into the rest of the Mid-Continent, while recent advances on the Pacific Coast were sustained. Gasoline prices are relatively good, therefore, throughout the country, with respect to both wholesale and retail sales.

These relatively favorable gasoline prices reflect generally successful regulation of crude oil production as well as the gasoline market stabilization plans lately put in effect in East Texas and on the Pacific Coast with approval of the federal government. Both plans involve purchases of distress gasoline by the larger companies, and obligation of the small refiners to process only legally produced crude and to comply with oil code administration allocations of gasoline production quotas to refineries.

Last week the refinery prices on all grades of gasoline were an eighth-cent higher throughout the Mid-Continent than they had been a week earlier. For East Texas the prices were three eighths-cent higher than two weeks before. The new quotations in East Texas were averaging 3⅝ cents a gallon for third grade, 4¼ cents for middle grade, and 4½ cents for first grade. Group Three prices had risen meanwhile to 3⅞, 4½ and 4¾ cents.

Earnings Records and Prospects

For the first half of 1934 oil company operations have been generally profitable, and have of course compared to pronounced advantage with the exceptionally adverse 1933 first half. In the opening quarter of 1934 results were the best for that period since 1930. The second quarter is normally better than the first, due to rising gasoline consumption. This year such second quarter improvement materialized for some companies, especially for those primarily producers, with crude prices sustained and production higher. But the 1934 second quarter results for integrated companies were varied, due to gasoline price cutting in most sections of the country; some concerns showing moderate improvement over the first quarter, and others, especially on the Pacific Coast, experiencing recessions.

The closing half of 1934 has started off auspiciously, with gasoline market disturbances of the second quarter at least temporarily eliminated; with the country's average retail gasoline price about three cents above the 15-year record "low" of a year ago; and with demand for all petroleum products near all-time "highs." Regulation of crude production continues fairly successful, meanwhile, and there is no immediate threat of disturbance of that control. Thus the second half of 1934 promises to compare favorably with the first half, and also with the relatively successful latter half of 1933, when the industry's current "recovery" got under way with a bang.

Increasing East Texas *Allowable* *Major Consideration* At New Hearing

Austin, Texas.—A brief statement of the changes in the physical condition of Texas oil fields probably will constitute the principal evidence presented at the statewide proration hearing before the Texas Railroad Commission on Monday, July 23.

A recheck of the allowables now in effect in the state indicates that the total allowable will still be less at the end of July, than the federal allocation of 1,042,100 barrels per day.

Adjustments made in various districts since the new orders were issued on July 1 have been completed.

The only factor to be considered in determining the probable allowable on August 1, is the constantly increasing allowable for the East Texas field, which is based on 4.5 percent of the hourly potential, and grows with the addition of each new well.

On July 15, this allowable had reached 467,638 barrels per day, and the state allowable totaled 1,036,259 barrels per day, 5841 barrels less than the allocation recommended by the Bureau of Mines for Texas.

The East Texas allowable is increasing at the rate of about 150 barrels per day, which means a probable total increase of 2250 barrels during the month of July. This would indicate that on August 1, the allowable for the field will have reached 469,888 barrels per day, bringing the state allowable up to 1,039,509 barrels per day.

However, there is one uncertain factor in determining the East Texas allowable for August 1. The commission's engineers are now engaged in making potential tests of the field, and plan to issue revised schedules of the potentials of the wells based on this survey. The preliminary tests made on west edge wells indicated that potentials there, the best in the field, had decreased perceptibly. These engineers believe that this indicates a much lower potential for the field than the present calculations show, and since the field is allowed to produce a portion of its potential, these reductions will be reflected in the allowable. No accurate estimate of the amount of decline can be determined until the data from these tests is compiled.

On the first of July, the commission's order allowed the production of 1,007,918 barrels per day. On July 15, adjustments and normal increases had brought this figure up to 1,036,259 barrels per day, a total increase of 28,341 barrels.

The appended table indicates the changes in the allowable which took place on July 1, and the subsequent adjustments.

District	June 30 Allowable	July 1 Allowable	July 15 Allowable	Inc. since July 1
East Texas	510,955	459,896	467,638	7,742
West Texas	140,718	135,089	143,657	8,568
Panhandle	56,800	56,800	56,800	....
Gulf Coast	169,038	165,612	169,012	3,400
West Central Texas	31,000	31,000	31,000	....
Southwest Texas	52,650	52,625	61,156	8,531
North Texas	56,500	56,500	56,500	....
East Central Texas	55,246	50,496	50,496	....
Total	1,071,033	1,007,918	1,036,259	28,341

While the estimated allowable of 1,039,509 begins to approach the consumer demand for Texas oil, as calculated by the Bureau of Mines, it is still 10,000 barrels under the total nominations that were made for the month of August by Texas purchasers at the last statewide hearing. These totaled 1,149,618 barrels per day, exceeding the nominations for July by some 2000 barrels per day.

However, it is impossible to determine exactly just how nearly indicative of the Texas market these nominations may be. The commission has made every effort to determine this information accurately, and has constantly improved its methods of gathering the data and compiling it.

The nominations by districts, as received at the last hearing, as compared with probable allowables, unless changed at the hearing, on August 1, are set out in the appended table.

District	——Nominations—— July	Aug.	Sept.	Allowable Aug. 1
East Texas	498,797	500,617	500,606	469,888
West Texas	168,622	168,822	167,622	143,657
Panhandle	57,509	57,574	57,683	56,800
Gulf Coast	207,936	207,976	209,086	169,012
West Central Texas	33,215	33,275	33,306	31,000
Southwest Texas	54,386	54,153	54,111	61,156
North Texas	58,826	58,826	58,826	56,500
East Central Texas	68,375	68,375	68,375	50,496
Total	1,147,666	1,149,618	1,149,615	1,039,509

It should be noted in this connection that the Southwest Texas district is the only sector of the state which has an allowable higher than the nominations that were filed by the railroad commission.

These comparisons, however, indicate that the railroad commission is faced with no immediate emergency that will come up at the hearing Monday.

When the fall decline begins the situation may present serious problems in bringing the production of the state down to the necessary figure.

Potential Gauges *in East Texas* Indicate Decline

Austin, Texas.—Completion of potential tests in East Texas under direction of the engineering department of the Texas Railroad Commission indicate that the total allowable of the field will be materially reduced on August 1, unless the percentages of the hourly potential allowed is increased. The tests were virtually completed Friday, July 20, and at that time no well had made 1000 barrels per hour. Tests over the field generally had not been made for nearly a year, which accounts for the decided changes reflected by these tests.

It is expected that the number of wells classed as marginal wells be materially increased, and may result in a reduction of total allowable of 20 to 25 percent.

Either of these estimated cuts would reduce the allowable below 400,000 barrels per day.

The rate of flow recommended by Chief Petroleum Engineer Gordon. Commission will allow the production of five percent of the hourly potential to avoid the large cut which would normally follow readjustments on the current basis of 4.5 percent of the hourly potential. Such an adjustment would be reasonable in the face of information gathered by private companies, which indicates that the bottom-hole pressure have declined but slightly since July 1. The tests made, which did not include east-edge wells, indicated an average increase of 12 pounds during the first 12 days of July, or one pound per day. While these tests were not spread over an area wide enough to be indicative of exact conditions in the field as a whole, engineers expressed the opinion that they did indicate that general field pressures were on the rise.

On the basis of this information, it would appear that an allowable for the field to continue production at the current rate could be maintained without creating a wasteful condition relative to pressure decline.

Ickes Orders Oklahoma Drilling Test Shut Down

Washington, D. C.—Declaring that the full force of the government would be thrown behind the oil administration's plan for the orderly development of the Crescent pool in Oklahoma, Oil Administrator Harold L. Ickes today ordered Eason Oil Company of Enid to discontinue immediately the drilling of a well which it proposed to place at the side of its 40-acre tract instead of in the center as provided under the plan.

Failure of the company to comply with the order, Ickes announced, would result in immediate prosecution by the Department of Justice.

Following announcement of the plan to permit the sinking of one well in the center of each tract, except where exceptions were granted, Eason Oil Company asked for permission to sink its well on the edge of its tract. Several hearings were held by the Petroleum Administrative Board, both in Washington and in Oklahoma, at which all other operators opposed the request, and denial of the application was recommended.

It was pointed out by the board that if the company were permitted to drill on the edge of its property it would be necessary to permit owners of three adjoining tracts to drill offset wells. Companies adjoining the offset wells would request similar permission and the result would be the sinking of many wells, forcing a 10-acre spacing instead of the 40-acre limit.

Although the Eason company was requested by the board to take no action while its request was pending, drilling was started at the edge of the property, it was stated by the administrator.

Minimum Drilling Rates Are Approved by Ickes

Washington, D. C.—Basic rates to be charged for drilling in some of the Oklahoma and Texas fields, to assure the meeting of costs of operations, were announced July 16 by Harold L. Ickes, oil administrator, in approving recommendations of the drilling practices committees of the two states.

Emphasizing that the schedules do not constitute price fixing, Ickes explained that these were established as minimum through collective action by drillers and producers on the committees.

Per foot drilling costs recommended by the Oklahoma committee were $3.34 for the Seminole field, above 3500 feet, and $4.37 below 3500 feet; $3.81 for Stroud; $4.34 for Chandler and for the Perry area of the Lucien field; $5.95 for the Crescent field and $5.15 for Oklahoma City. Insufficient figures for determining costs in the southern Oklahoma area prevented the agreement on rates for that section, it was said.

The Texas committee recommended a cost of $1.51 per foot for rotary drilling in East Texas for a 90-day test period from May 23, to permit time in which to obtain some technical data considered necessary before a final finding can be recommended. A similar test period was recommended for rotary drilling in the Government Wells field at $1.48 per foot and the Greta field at $2.73 per foot.

"The figures contained in my order were arrived at by the drilling practices committees in Texas and Oklahoma and the Petroleum Administrative Board after a careful investigation and hearings, in which all the pertinent data then available were gathered," the administrator explained.

"They are believed to represent as accurately as can be obtained at this time the actual cost of drilling operations in the various fields involved.

"I have been advised by the Planning and Coordination Committee and by the board that the promulgation of the price schedules as a basis for bargaining between drilling contractors and those who employ them will assist materially in increasing compliance with the oil code by drilling contractors whose operating costs have been materially increased by code provisions for shorter hours and better wages."

Fuel Oil *Prices Are To Be* Investigated by Ickes

Washington, D. C.—A thorough investigation into prices being charged for fuel and heating oils was ordered July 17 by Secretary of the Interior Harold L. Ickes, the oil administrator, as a result of information collected in recent weeks by the Petroleum Administrative Board, indicating general increases. In addition to instructing the board to look into prices, Administrator Ickes ordered an inquiry into charges that some practices of the distributing companies tended to create a monopoly. The charges did not specify what practices are monopolistic. The board was instructed to hear the specific charges and investigate them.

The inquiry was considered necessary by the oil administration to protect the interests of household and industrial consumers of fuel and heating oils. In a letter to General Hugh S. Johnson, administrator for National Recovery, Administrator Ickes invited the Consumers Advisory Board of the National Recovery Administration to assist the Petroleum Administrative Board in the investigation, which will open with a public hearing on July 30 in the Auditorium of the Department of the Interior. Code authorities of other industries affected by the prices also will be invited to present their views, along with any other consumers who desire to be heard. The Planning and Coordination Committee, representing the Oil Industry under the oil code, will present an extensive brief for the industry.

"In the past few weeks, the board has received a number of letters from consumers of heating oil, shipping companies and other users of fuel oil, protesting against the prevailing prices," Administrator Ickes said. "We feel that their complaints merit the most careful investigation to determine whether fair prices are being charged. I have been advised by the board that the prices may be advancing too rapidly. We cannot determine from the information now available to us whether the advances are altogether justified. We desire to get at all the facts. In our administration of the oil code, we hold of paramount importance our responsibility to the consumer. We do not intend to permit the consumer to be required to pay an exorbitant price for any oil product because of the operation of the code or activities which any oil company attributes to the code. In fairness to the industry, it should also have an opportunity to show whether an increase is proper. We will take whatever action we deem necessary on the basis of the facts as developed."

Oklahoma Well Potential Test Ordered

Oklahoma City.—Potential tests in Class C pools of Oklahoma were commenced on Monday, July 16, and are required to be completed before August 1, 1934, when they are to become effective. New potentials will be based on a 12-hour open flow test to be taken on each well. Fields falling in the class are as follows: Crescent in Logan County, present potential, 63,571 barrels; Lucien, Noble County, present potential, 127,143 barrels; Keokuk, Seminole County, present potential, 14,608 barrels; and the Simpson sand of Fish, Hughes County, present potential, 722 barrels.

Investigating Committee Hears East Texas 'Hot' Case

Tyler, Texas.—Promising to return in about six weeks to gather statements which will be embodied in its formal report to the parent body, the Cole Congressional Oil Investigating Committee left the East Texas field late Wednesday to disperse to the homes of the members.

Largely by chance, the investigators were privileged to hear actual testimony concerning one large "hot" oil operation during the regular tender hearing of the Texas Railroad Commission at Kilgore Wednesday afternoon. The committee heard a lease operator swear that approximately 160,000 barrels had been run from the lease during a six-weeks period, while a woman and her son who admitted running the oil said they received, respectively, one cent a barrel and $3.00 a day out of the nickel a barrel the lease operator was paid. Assistant Attorney General Neal Powers brought out the fact by questions asked the witness.

The committee, which on its arrival was inclined to the opinion that "conditions were not as bad as pictured in advance" went away with "very definite conclusions" about the situation, it said, but would not make them public. By request of the committee, already tired, most of the entertainment planned for the visitors was dispensed with.

Committee Is Finding Differences in Opinion

Houston.—The special congressional committee that is investigating conditions in the oil industry left Houston July 16 for Tyler. During the three day stay here the committee held a number of informal conferences with oil men, visited the Conroe oil field and made a trip down the Houston Ship Channel, which included an inspection tour through one of the large refineries.

The aim and object of the congressional investigation, according to Chairman Cole, is "merely to ascertain the truth about oil by interviewing oil operators. Our recommendations probably not be made public until after further hearings. I can not say just when the final hearings will be held. They will, however, be staged in some Mid-Continent city easily accessible to the Mid-Continent operator."

The congressional committee besides its chairman includes Samuel B. Pettingill (Indiana), C. E. Mapes (Michigan), C. A. Wolverton (New Jersey) and Edward Kelly (Illinois).

Accompanying the party to Houston were Edward B. Swanson, chief of the petroleum division of the U. S. Bureau of Mines; Charles I. Francis, special assistant U. S. attorney general; Representative Martin Dies (Texas), who is serving as special counsel; and E. O. Thompson, member of the railroad commission.

During the informal conferences with oil both majors and independents were heard, and everyone present in the room was urged to voice his opinions. Frequent questions from the members of the committee kept the discussion going, and because parliamentary rules were dispensed with everyone had opportunities of explaining his views on the various topics to the committee.

Opinions presented to the committee were widely divided, some of the Houstonians declaring that further legislation was needed, while others were of the belief that the industry is not as bad off as pictured and that additional legislation was not required. There, likewise, were opposite views on the benefits that may have been derived under the code, and whether the Texas Railroad Commission was able to control the production and refining of oil produced in this state, which is the seat of trouble.

Concluding the committee's stay in Houston was a dinner given by the Chamber of Commerce, at which more than 150 oil men were in attendance. Members of the committee made brief talks, in which they outlined their difficulties, told of the purpose of the trip and expressed hope that the results would be beneficial.

Congressman Samuel B. Pettingill of Indiana, in speaking of the differences in opinion that they had heard made the statement, "I don't know what the result of our investigation will be, but I do know that it will not suit everybody."

August Federal Allocation Cut 81,000 Barrels Under July

Washington, D. C., July 21.—Permissable crude oil production next month will be reduced 81,000 barrels from the July daily allocation of 2,530,-300 to 2,449,300 barrels, under orders announced July 21 by Oil Administrator Harold L. Ickes, effecive at 7 a. m. August 1.

The reduction in crude output follows a cut in the August gasoline output to 36,270,000 barrels and an order that gasoline inventories be reduced 4,270,000 barrels during the month, necessitated by the fact that the surplus in storage has been increasing, tending to hold back recovery, it was explained by the oil administrator.

More than half of the crude reduction is to be borne by Texas, where the allowable has been cut 40,800 barrels; nearly half of the remainder is covered by a 19,200-barrel cut in California. Oklahoma is cut only 9400 barrels. Three states were given increases, the greatest being 1800 barrels to Wyoming, while Colorado, Indiana and Michigan allocations are left unchanged.

State allocations for August, as announced by the administrator, are as follows: Arkansas, 30,400 barrels, against 33,000; California, 490,200 against 509,400; Colorado, 3000, unchanged; Illinois, 12,500 against 12,600; Indiana, 2300, unchanged; Kansas, 131,-200 against 134,500; Kentucky, 11,700 against 13,100; Louisiana, 87,200 against 88,900; Michigan, 33,200, unchanged; Montana, 8800 against 8000; New Mexico, 46,700 against 46,600; New York, 10,600 against 11,700; Ohio, 12,800 against 12,900; Oklahoma, 480,-100 against 489,500; Pennsylvania, 40,-700 against 44,000; Texas, 1,001,300 against 1,042,100; West Virginia, 11,600 against 12,300, and Wyoming, 35,000 against 33,200.

East Texas Pressure Nears New Low Mark

Tyler, Texas.—A 10-pound drop in weighted average reservoir pressure of the East Texas field was reported for the 30-day period ending July 12, as compared to an 11-pound drop the previous month. The latest survey of the field by a committee of engineers, who have been taking regular readings since August, 1931, credits the average reservoir pressure at the 3300-foot contour with being down to 1229 pounds.

These pressure readings are being used as a guide in timing the approach of the pumping stage, and are of great importance to operators and equipment concerns.

Another pressure drop equal to that sustained the past two months will establish a new low for the field. The record low was made last July when the withdrawal of more than one mililon barrels of crude daily for a period cut the weighted average pressure to 1223 pounds, as compared to an original peak of 1620 pounds estimated to have prevailed prior to development.

The Oil Business *Is Now* Honest With Itself

DORSEY HAGER

WE are living in one of the most interesting and important periods of history. It is a new era that will influence business as well as civilization for years to come. The oil industry, like others, will be changed vitally. It is well under such conditions that oil men consider the future.

Predictions are dangerous as early as this, but there are some well defined trends which the author evaluates and upon which are based his outlook for the future. We are all interested in knowing where the "New Deal" is heading. The accompanying article represents the views of one oil man.

There may be many who differ, at least in part, with the views set forth in this article. But it represents, as stated, the viewpoint of one oil man, and as such we are glad to publish it.

AT last the oil business is on an honest basis with itself and the public. The old conservation talk, which was a good "stalking horse" for legislative action and for public sympathy, has been replaced by an honest conception of conservation. Too many advocates of conservation talked public good when they really meant profit conservation for themselves. It was difficult then to tell who was sincere or who had an ax to grind. A fine term was brought into disrepute.

The "conservation" farce caused the evils of proration; witness those excessive potentials based on 15-minute gauges and also the stepping-up of oil production by 100 percent to 200 percent so that in many cases actual production was a full 100 percent after the allowable cuts had been made. Neither have the evils of grafting field inspectors at Oklahoma City and in East Texas made a pretty picture for the oil men to consider.

All this is being changed. Conservation now means not only saving oil and gas, but includes an honest statement that profits are a necessary part of the scheme. No longer is chicanery or soft peddling on profits necessary. The old "bunk" of "public good" has been scrapped. There were a few honest conservationists, but now all oil men can frankly say "We conserve for profit." That spells an honest viewpoint. At last the industry is getting somewhere. Control of new drilling, proration and unitization are tools that now will be intelligently used to control the supply of oil. Equal, if not of greater importance to the oil industry, however, are the marketing pacts and codes that will assure a fair price for refined oil products and the abolition or outlawing of "hot" oil. Stolen oil still will be "bootlegged," but this will be, shortly it is hoped, of small importance.

Solidarity finally has come to the oil men, a forced solidarity it is true, but here nevertheless. It is disappointing to see how abortive past efforts have proven. When the so-called independent oil men fought for an oil tariff, one leader in that fight frankly stated privately that he did not give a damn for the rest of the oil men, that he was going his own way, yet all the time he was publicly championing a tariff. He also spoke for proration, but was breaking it right along. Such acts are sufficient to disgust anyone who believes in the oil industry. When the leaders betray the confidence of their followers like that only outside interference can force solidarity. Such men will not give lip service, but will seek every possible loophole to break the regulations.

Higher wages for labor under the "New Deal" is one of the important results sought. The oil industry ranks high in its fair treatment of labor, hence it is one of the least of the problems to be considered in straightening out the oil man's troubles. Labor has never been much of a problem in the oil business for labor as a whole has been well treated. The oil industry in that respect is far advanced, a matter of just pride to all oil men who pay high wages willingly. Also every driller hopes to become an oil producer or contractor.

Wages will be pushed as high as consistent with the price of oil, and as many men employed as possible. Three to four shifts on drilling wells are now general practice and also shorter hours for lease men, in fact all oil men work shorter hours and accomplish as much as before. Efficiency, incidentally, does not suffer, perhaps is increased, but efficiency is not the sole aim desired for business at present.

Profit Factors

But labor is not the big problem. What concerns the oil producer is the outlook ahead for the industry. As long as he can make money and keep things going he will employ all the labor he can. What the operator particularly wants to know is where this "New Deal" is heading. Where will profits come in is the really important question? Predictions are dangerous as early as this, but at least there are well defined tendencies that can be evaluated. Present tendencies are far easier to perceive than those under the old competitive or *laissez faire* system.

It is axiomatic that private business is conducted for profit. No profits, no business, and vice versa. All business points to one end and that is to obtain as large a profit as possible from the money, time, and labor invested.

Economists, in studying the various basal factors influencing profits, have usually considered supply, demand, cost, and price as the four important ones. To these should be added three more that are not usually considered. Namely, first, profit itself; second, governmental action, especially federal and state action, a most unpredictable factor, but of vital importance; and third, the fluctuations in the buying power of money.

News of large profits attracted much new money to the

oil business. New drilling by outsiders has increased production, or newly built refineries have put more refined products on the market, often with no increased demand and thus forced prices to drop. The interaction of profits thus stimulates new production and tends to depress the whole industry.

Governmental action is a profit factor in business, not just because of the possible protection afforded, but for the effects of taxation and the active interference of the state and the federal governments in proration programs, and in the interstate control of illegal oil. Governmental action is a factor that is uncertain, but likely at any time to interfere with the other normal factors that enter into all lines of business.

Money as a profit factor surely should have to be taken into account. The fluctuations in the buying power of money are real and most definite. If money returns remain stationary, and money buys less than it did before, real profit may be entirely eliminated and losses result. If money buys more than it did before, profits are necessarily larger, even though there is no increase in the dollars received. The fluctuations in the quantity of money, including credit, certainly affect prices, hence profits.

Usually the formula for profits has been simply stated thus: "Sales less cost give profits or losses."

The volume of sales are, of course, dependent upon supply and demand and upon prices at which the product sells. Costs are based on the expenses of production, on taxes, on overhead, on sale's cost, on depreciation and on obsolescence. Prices are dependent on many contributing factors such as competition within an industry, by outside competition with other products such as coal or natural gas that reduce demand for petroleum as fuel; or by alcohol, and other products that keep gasoline prices within maximum increased prices. Also the inability of a people to buy, as in the depression just passed, greatly influences price. Other factors, however, are an excess supply of oil lowers prices as scarcity increases them.

Thus before the "New Deal" there were seven major profit factors. Each of these factors were subject to change. Mathematically there were 253 different combinations of changes in these factors alone so that predictions as to what would happen were upset so often that it was difficult to make even fair approximations of future trends for more than a few months ahead.

Supply might increase, demand fall, or vice versa. Prices might change, costs would change least of all, but even costs fluctuate markedly. Prices also certainly change to a marked degree. Demand might increase or supply increase and prices not change or they might in turn increase—just to mention a few possibilities.

Looking Up!

Business Trends

What has happened under the "New Deal" is that the old competitive system has temporarily, at least, been swept aside. A fair profit is the present aim and to obtain it supply is to be controlled; demand is to be controlled; cost is to be controlled through minimum wages, and shorter working hours; cost of oil-well supplies are to be stabilized; price is to be controlled, not perhaps directly, but certainly indirectly; money is controlled; government activities are controlled; and lastly even profits are controlled through taxation. What this means to the oil producers, refiners and marketers is clear enough.

Imports being restricted, the domestic oil supply can diminish, but may not be increased materially for new drilling is controlled. True "wildcatting" is allowed but producing wells are limited, also more efficient proration is being enforced. Unitization is being more widely advocated than heretofore.

Imports are set at a low figure. This limits, of course, the competition of foreign oil. Exports are affected by competition with foreign oil, but present demand seems stable and should not be much decreased. In fact one way to increase oil demand is by developing foreign markets. However, at present other nations are producing oil that does not invade this country, but enters into foreign competition with United States products. It does not seem likely now that exports will grow to any large extent.

In regard to the future oil supply, the oil man can now discover new oil fields and establish new oil reserves, but cannot produce oil from them except as there is a definite need for the new oil. This affects definitely the small oil producer or operator and largely limits his operations to producing from his present properties. However, if he does open a new field and can outline the extent of this reserve he can sell to one of the major companies. Thus, there will be a market for new oil fields even if they are later shut down for a limited period, especially as now the Eastern, Western and parts of the Mid-Continent need new oil reserves.

Potential oil supplies do affect the future, if large they check activity, if small the search for new oil will increase. Also as long as the available oil supply is as large or larger than the needs (as is the present situation) profits will not be large. When the time comes that new oil production must be sought intensively, those who make the new discoveries will be fully compensated.

One hoped-for result is that there will be an honest gauge made of every oil field and the

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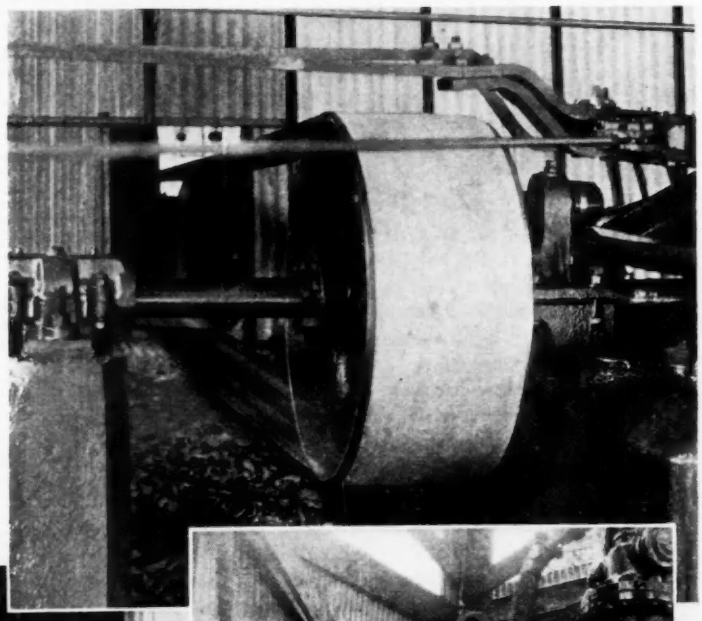

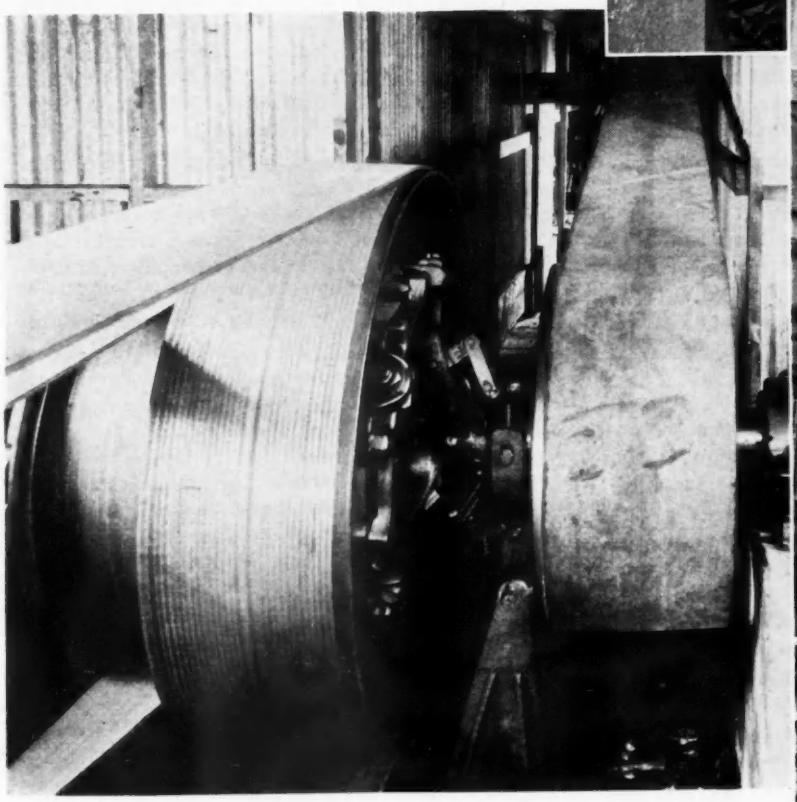

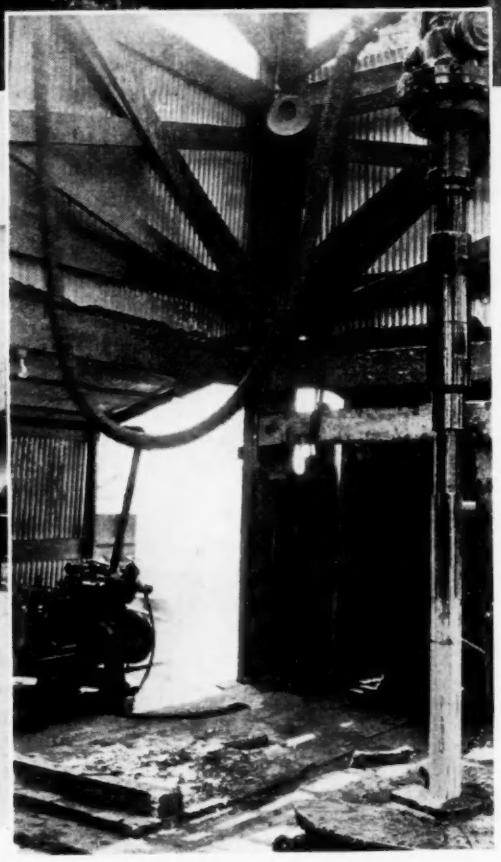

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Highflex Belting

establishment of true potential reserves instead of highly fallacious ones. The potentials of such fields as Yates in West Texas have been ridiculous when based on the short gauges made there. Such potentials have been a source of disgust to practical oil men, who realize their fallacies, and also for the reason they have been used as bludgeons to effect prorations that failed of their purpose.

Demand will remain static or be only slightly increased. Demand is to be controlled in a very definite sense. Competition between industries is also to be controlled for the interest of keeping men at work. How this control of demand is effected is simple enough. Fuel oil is not to be allowed to expand to the point of throwing coal workers out of employment. New gas fields are not welcome if they displace oil field workers, or coal miners.

This, it is true, makes for a slower growth of business, even tends to a static condition. Growth will, however, take place, based on the slow increase in population, and only as public policy dictates, but it guarantees greater national well-being, and a steady condition within the oil business. Oil consumption, then, will for several years depend upon the slow increase in population, the slow increase in automobile demand, and some increase in oil-fuel burners where it does not affect other basic industries.

Some expansion of oil products will come as the result of popularizing air traffic, but a fool-proof type of plane must be developed before that will take place. Also the increase of motor-driven trains will call for more oil products, but against both airplanes and trains, set the increasing efficiency of gasoline for the automotive vehicle. The general use of light automobiles capable of 80 to 100 miles per gallon are to come within 10 years or less as predicted by Kettering of General Motors. That means less oil.

However, oil men will find that to maintain the present supply to fill a demand for 2,500,000 more or less barrels of oil daily is a job that will tax all their resources. Where to get the new oil is really more of a problem than to determine the increased demand.

Costs are to be controlled for wages will be at a minimum that will change as the cost of living increases. Oil well supplies will increase in cost, but such costs will be kept within a range that will correspond with the increases in the prices of crude oil. Taxation is an item that should be reduced instead of increased. As general business improves taxation should decrease. Overhead and obsolescence will, however, not materially change.

Prices are really controlled. A price assuring a profit to marginal properties will accordingly benefit old properties to a greater degree than at present. "Stripper wells" will be made to pay. Prices will, however, be checked so that they do not increase costs in other industries too much even though the public could pay the higher price for gasoline. The range of prices must vary with operating conditions, and supply and demand for the different oil fields. It is a monumental task to fix the relationships between these factors, but it is easier now that the industry must make the effort for sound planning so essential to success.

The success of the marketing code will bring in time the elimination of one half of the present filling stations, perhaps more. Pumps should be installed with sound reason, not with just the hope to make money. The past system or lack of it has resulted in marketing chaos. Competition will be limited among marketers to a large extent by keeping uniform sales practices. Undercutting, throat cutting competition will be eliminated.

Money is to be controlled by the present methods of inflation. The future dollar will buy less than in 1934. The present tendency seems to look to a 1926 dollar as the present limit. However, stabilization of the dollar has not yet been effected. All costs, prices and profits will be quoted in a dollar of less buying power than the 1934 dollar. That is assured.

State and federal governmental actions are being synchronized and harmonized. This should result in a definite cooperation that will give the oil industry a plan of governmental action that will not be subject to fitful political changes.

Uniformity of sound proration practice, more general employment of unitization. Control of "hot oil" and a better policy on taxation should result from such efforts.

Honest officials, fair treatment and real understanding of the oil man's problems should be sought and must be procured. Profits also are being controlled indirectly, perhaps even directly by increased taxation on large profits. Profits as a factor in bringing new money into the oil business will probably be more favorable than in some years past as oil companies will earn more profits, even if not large ones. But the safety of investment will be enhanced, although not much, and new money will be invested in the oil business. Against this, however, must be set the present determination to check unlimited drilling in new pools; also profits will not become an important positive factor until earned. Losses are positive deterrents to investors, and the oil business for several years has as a whole been losing heavily. Little new money then need be expected until good profits are announced. Of course there will be some producers, refiners and marketers who will make larger profits than others. The successful operator who opens a new oil field can sell it for a large profit. Discovery still will pay handsomely.

However, there is no call generally to expect large profits until the supply of oil has been decreased and grown scarce enough to bring higher prices for oil. This may be next year, as there is at present an oil reserve variously estimated at from one to two years at the present rate of production. However, the handling of such reserves efficiently requires that a long time is necessary to efficiently produce the oil from such fields.

But is scarcity under the present idea of a controlled industry desirable? Under the present system which will probably continue in some form it seems important that new fields be discovered as rapidly as possible. The discovery of a number of new fields and a carefully planned development of such new fields would make present reserves last longer for there would be a slower drainage based on better operating technique. The best policy would be to find every field possible, and then develop the new fields efficiently. At present this cannot be done, but with a well supervised campaign it is possible. This will result in steady, consistent profits if there is real control.

There will be some disagreement with this view, but it is fundamentally sound. It is perhaps, too Utopian a view at present, but the principle will be developed.

The oil business now is off on a new course under federal advisement. There will be recalcitrants, but there is machinery to curb the malcontents and "back-sliders." To achieve solidarity, every oil man should put his shoulder to the wheel. The future outlook seems fairly well defined. The old saying "There is nothing certain but death and taxes" is defeatism. With an organized, integrated industry the oil business is headed for a sound business future with assured profits. There is no need of alarmists crying Communism or State Socialism unless indeed the oil men lack rudimentary intelligence, a characteristic one cannot accuse them of, even granting past mistakes.

The Trend in Petroleum Technology

STANLEY HEROLD

OUR laws of fluid mechanics are based largely upon experiments performed originally by Archimedes, Leonardo da Vinci, Stevinus, Galileo, Torricelli, Pascal, and Daniel Bernoulli. Newton accepted the basic principles pertaining to these experiments and included them in his general treatise on mechanics.

Since Newton's time our scientists seem to have complicated our studies in fluid mechanics by bringing to light all possible effects of molecular forces, such as those that are found to come into play at boundary surfaces between solids and liquids, between immiscible liquids, between solids and gases, and between liquids and gases. Undoubtedly these forces affect the behavior of oil and gas reservoirs, and, consequently, the wells from which they produce, but, obviously, their influence is of molecular dimensions. We yet have much to learn of the mass action of fluids in reservoirs.

WHILE studies of molecular action continue in many of our universities, particularly in the departments of physical chemistry, today the tendency in departments of petroleum technology is to investigate mass action. Thus we are returning in simplicity to the nature of experiments previous to the time of Newton. The required apparatus is easily accessible and very inexpensive.

AS an example of simplicity a five-gallon kerosene can with an open top and a nail-hole in the bottom can be made to perform interestingly in the kitchen. Place it over the edge of the sink-table so that the nail-hole may produce directly into the sink; and run a piece of rubber garden hose from the faucet to the can. With a finger on the hole, fill the can approximately three quarters full of water; slow down the rate of inflow and remove the finger. The head of water in the can now will automatically adjust itself upward or downward until the rate of outflow at the bottom exactly equals the rate of inflow at the top.

NOW many of our oil and gas wells behave precisely like the nail-hole in the can. The rate of production continues without decline. Of course we would likely measure the production rate from the can in gallons per minute and that from the natural reservoir in barrels of oil and cubic feet of gas per day, per week, or per month. The two reservoirs differ only in their rates of production.

Oil wells in the Mexican fields certainly behave in this fashion, and they have done so from their initial days of production. Although in many wells the production has turned from oil to water, the rate of production of liquid has remained the same.

The inflow into the natural reservoir is, of course, the water of rain that falls in the catchment basin wherein lies the exposure of the productive formation. If they do not do so already, all our oil wells and gas wells in the regions of the Pacific and Gulf Coasts will eventually produce without further decline, provided the rain continues to fall sufficiently in the normal wet seasons of the year. For any wells that have not yet entered this stage of production the head of water in the formation is still lowering to a position where the outflow will just offset the inflow.

These reservoirs, for which we must draw straight horizontal lines as production curves, are said to be in Hydraulic Control.

Heaving Shale *Involves Chemical And Mechanical* Drilling Methods

Part 2—Practices Used in Combatting this Formation

BRAD MILLS
Associate Editor

IN an earlier issue an article entitled "Scientific Research Needed to Solve Problem of Heaving Shale" discussed the various theories regarding the action of this peculiar formation. In this article, a review is made of the sundry methods that have been used by operators in combatting heaving shale. Past experiments have given engineers a wider knowledge of the difficulties to be anticipated in penetrating the shale and this information will be the basis for future developments.

HEAVING shale has been combatted with some degree of success, but no effective method for drilling under all conditions has been found. Several major Gulf Coast operators have spent large sums in fighting it, and their research departments have cooperated with drilling organizations over a period of several years. The net result has been radical changes in both mechanics and methods of drilling in these troublesome formations.

The hope of solving the heaving shale problem has fascinated companies, engineers and inventors alike. The total number of control methods attempted probably would run into the hundreds. They have been of both a mechanical and chemical nature. Theory has played a heavy part in these experiments. Difference in opinion as to what action takes place while drilling in heaving shales has influenced the method of attack. Intensity of the heaving or sluffing action has also been a factor.

A few companies have attempted to handle the heaving shale problem on the theory that it fills the hole above point of entry, but most large producing companies do not think this to be the case. Where there is for some reason a definite swabbing action, the shale may follow up the hole to some extent, but loss of "good hole" above the upper point of entry is extremely unusual. Loss of a limited amount of hole above the entry point could be caused by settling of shale in suspension in the drilling fluid.

The heaving shale problem is one involving both mechanics and chemistry. The latter entered the picture during recent years. Reaction of the shale to free water was an admitted source of trouble long before systematic efforts to control drilling fluid were advanced. Shale characteristics and reactions are not uniform, and fairly satisfactory control methods in some areas have failed in others. There are many degrees of intensity of heaving, and this variation has done almost as much harm as good in the search for a solution to the problem.

It obviously follows that all methods tried in the past have at least to an extent been failures. Some of the practices that have been successful in some districts have failed altogether in others. The present attempt to drill through heaving shale in the Vinton, Louisiana, field has been one of the most successful. Some of the dozens of methods used in attempting to drill through these shales of the Texas-Louisiana Gulf Coast were:

1. Refrigeration.
2. Cementing off.
3. Drilling under pressure.
4. Rapid drilling—excessive weight.
5. Very low fluid velocities.
6. Use of very heavy and/or viscous muds.
7. Circulating with oil.
8. Circulating with saturated salt solution.
9. Carrying casing.

Difficulty in getting the average drilling crew to give an accurate account of well action has been a factor in many failures. Reports that shale came out of the hole "like sausage out of a grinder," and many other exaggerated reports have been confusing. Several efforts to control the formation have been based on the belief that heaving action causes the shale to work its way up the hole above level of entry. These attempts have not been successful.

Most operating companies attempt to keep free water from coming in contact with the wall of the hole. They generally agree that this is a beneficial practice. The circulation with a saturated salt solution was not so good, as salt water was water after all. The practice, however, was in the nature of an experiment, and the effort was to determine the reaction of the formation to the solution.

Chemicals are playing an increasingly heavy part in control methods. Ultimate successful drilling in heaving shale probably will be based on a combination chemical and mechanical method. The drilling fluid has been the chief medium of attack, and will continue to be as long as chemicals are so much in favor.

Record at Vinton

In drilling through more than 2400 feet of shaly formation at Vinton, Union Sulphur Company has made a record that is attracting attention of all major operators who have experienced heaving shale. This company encountered heaving shale at 4133 feet in Vincent 1, but decided to make a determined effort to drill through it. The greatest previous penetration had been less than 900 feet. Vinton has been a very consistent salt dome producer, but possibility of producing zones below the heaving shale makes the field potentially more interesting.

Drilling fluid was by far the greatest factor in successfully drilling more than 2300 feet below top of the heaving shale in Vincent 1. Ordinary rotary mud was discarded soon after the shale was topped, and special drilling fluid was substituted. Little or no special equipment was used.

A 14-inch hole was drilled to 1145 feet, where 12½-inch casing was cemented. The hole was reduced, and at 4322 feet and string of 9⅝-inch casing was cemented. An 8¾-inch hole has been drilled from the final shutoff to bottom. The last string of casing shut off the top portion of the

heaving shale, but this formation has been present most of the time below the shutoff.

Union Sulphur Company has found that speed in drilling is less important than care, where heaving shale is the problem. Speed tends to disturb the hole, while steady drilling under uniform conditions with special drilling fluid has enabled the company to drill almost three times as far into the shale as had been drilled before.

The special drilling fluid was mixed to 12.5 pounds per gallon and a close watch was maintained. One man gave all his time to keeping the weight and consistency of the fluid up to an exact standard.

Quebracho was added to the drilling fluid to control its viscosity and to make it "slick." This fluid conditioner is made from the bark of certain tropical trees and is very rich in tannin. A small amount of caustic soda was also added to form a sodium tannate solution. Drilling fluid thus treated is very slippery and effective in keeping drill pipe free. A small amount spilled on the derrick floor is enough to make walking difficult. Percentage of quebracho in the drilling fluid was small. Drilling fluid used in drilling Vinton 1 has been easily treated with this powdered bark, which has long been used in dyeing and tanning operations.

The first shale encountered was lying almost flat. It was a light, ashy formation and was considerably affected by water. This was followed by streaks of crystallized shale, but the strata below 5000 feet were mostly shales. The lower streaks showed a dipping structural condition.

In drilling through heaving shale in Vinton 1, Union Sulphur Company learned several tricks. One of these was to adjust the pumps and mud volume to wash out the cuttings at the exact rate of accumulation. This caused a minimum disturbance in the hole and permitted continuous drilling. More rapid drilling was attempted in the first shale beds, but the net gain in depth was less than with the slower method adopted after experimenting with fluid volumes and pressures.

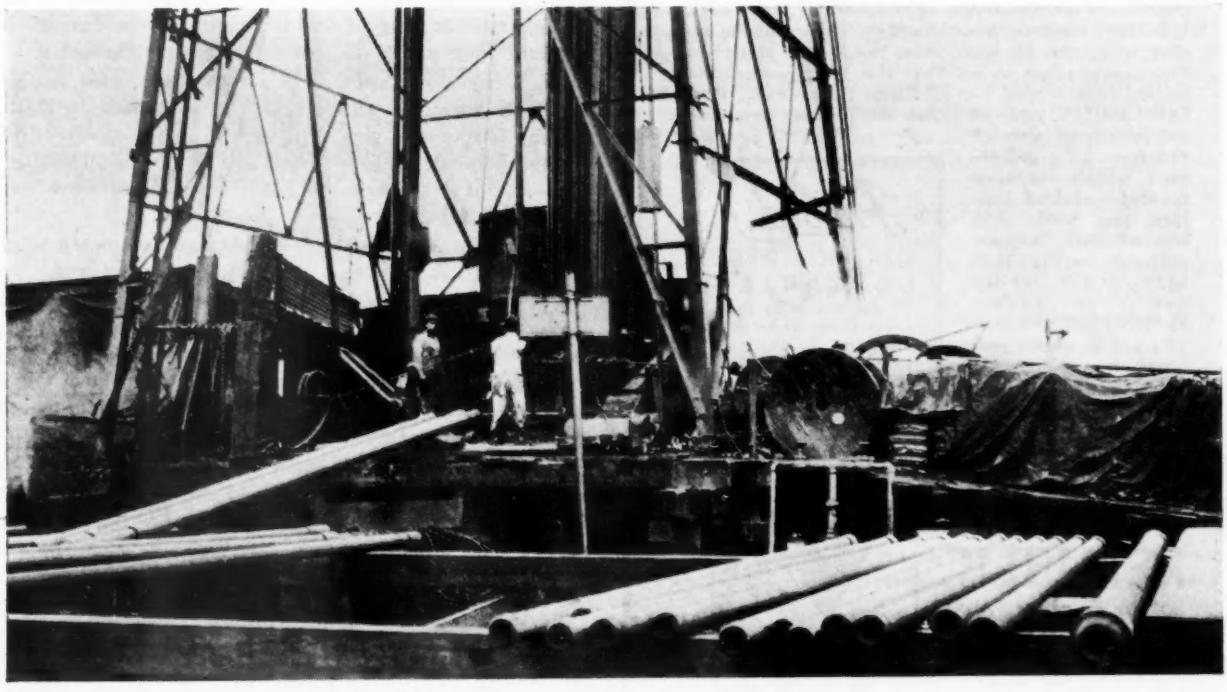
Two Pumps

The two slush pumps were compounded to assure a steady flow and pressure of drilling fluid. One pump picked up the mud substitute and the other fed it to the well. Picking up heavy mud normally reduces the efficiency of a pump by about 25 percent. The inside pump, or the one actually supplying the well, is thus enabled to deliver a uniform stream of drilling fluid with minimum pressure fluctuation.

When the pumps showed a tendency to stall, they were immediately shut down and the built-up pressure allowed to find relief by reversal through the drill pipe. This usually caused the shaly bridge to drop down and follow the fluid from the hole. This proved to be an important practice, since the shale was coming in the hole from a point above bottom. The usual tendency in some areas has been to hold the pressure on the pumps in an attempt to push the bridge upward. Such a practice actually supports the bridge and permits it to strengthen, according to experience in drilling Vinton 1.

The wall of the hole was treated with respect at all times to prevent a disturbance. It required from 18 to 24 hours to change bits. Care was exercised to prevent a swabbing action. The major aim was to build a wall through the shale that would approach a normal wall in other formations. Good drilling time was made in the upper portion of the shale body, but the net speed was reduced as drilling progressed. About 16 feet per day was drilled below 6400 feet, but progress depended largely upon the amount of shale entering the hole from above.

Successful use of cement to eliminate a streak of heaving shale in the Batson field has been announced by Danciger Oil & Refining Company. A bad shale condition



Union Sulphur Company's Vincent 1, deep test in the Vinton field that has shown more than 2400 feet of shaly formation.

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was encountered above 4400 feet in Mary Hooks 2, and a string of 7⅝-inch casing cemented at 4411 feet. The hole was drilled with difficulty to 4477 feet, but a long series of heaves and caves made it impossible to reach bottom.

The drill pipe was reduced in size from four-inch to 2½-inch, but this change offered no advantage. The cavity was found to extend from a point just below the shoe of the casing to a point a short distance above the shoe. The cementing job was not effective, and a bad caving condition both above and below the casing shoe prevented progress for several months.

A string of 2½-inch drill pipe was run to a point 22 feet above bottom of the casing, and the well was pumped for 30 hours to remove all loose shale. This left a bridge at 4436 feet. It was at this stage that cement was used.

Cement Through Bit

A five-inch bit was run on the 2½-inch drill pipe as a cementing medium. A hole was drilled vertically in the bit from the top to a point near the middle. Holes were then drilled out either side of the bit to form a "T." Fifty sacks of ordinary cement were then pumped down through the small drill pipe and bit, passing out of the bit about 20 feet below the shoe of the casing. This cement should have filled the casing to a point about 200 feet above the shoe.

The drill pipe was then raised eight fourbles off bottom, and the casing rams closed. Circulation was then forced through the casing and back through the drill pipe for assurance that cement was deposited out of the drill pipe. In this operation, about two sacks of cement were recovered through the drill pipe.

With the rams and top of drill pipe closed, the high-pressure pumps started depositing mud in the casing. This displaced the cement in the casing with mud. The pressure increased from 900 pounds to 1800 pounds. About nine barrels of cement in the casing were forced out by the mud. A similar amount of mud was deposited, but a calculation of the amount of cement forced out and mud pumped in showed five feet of solid cement in the casing. This pressure thoroughly filled the cavity with cement.

The cement was allowed to set 4½ days. One double of four-inch drill pipe and a rock bit were used to drill the cement out of the pipe and cavity. After slowly drilling out the cement, bottom of the old hole was picked up. A 6¾-inch bit was then run and the hole cleaned out to bottom at 4477 feet.

The well was drilled to 4795 feet and completed with no further difficulty. Screen was set on bottom and the cemented cavity caused no trouble.

Heaving shale has caused no end of trouble at Sheppards Mott, Matagorda County. Eight wells have been started, but none have been completed. Cockburn Oil Corporation has been most active in the district, but has been unable to complete one of five wells started.

Oils Consolidated recently borrowed an outstanding chemist from a large oil company, but the special drilling fluid diagnosed as a probable remedy for the shale failed to solve the problem. In this experiment, the drilling mud was thinned and lightened with chemicals to about 9.5 pounds, but the drill pipe stuck soon after the fluid was substituted.

This company drilled to 5509 feet in Hawkins 2, but has been unable to make steady progress after running 9⅝-inch casing to 5354 feet. With only 150 feet of open hole, the well has heaved and caved with great force. Almost every mechanical method and trick has been tried with

little success. The shale carries a high gas pressure and a full hydrostatic head of fluid has not been effective.

West Columbia has been the center of many experiments that were mostly unsuccessful. It has been impossible to drill through heaving shale on the south and southwest flanks of this field, but the formation has not given so much trouble in other parts of the field.

Experiments at West Columbia

The Texas Company has spared no expense in efforts to develop parts of this field, but the heaving shale problem has not been solved. In 1920 equipment was partially assembled to drill Hogg 9 with a chilled circulating medium. It was perhaps the first time refrigeration came so near a trial in fighting heaving shale. A brine solution was considered, but developments in other parts of the field necessitated removal of equipment, and the "freezing" method was never tried. Company officials were divided on the wisdom of such a move, and engineers have since decided that use of ice or refrigerants has little possibilities.

The Texas Company was a pioneer in drilling under pressure to fight heaving shale. At West Columbia special equipment assembled by this company was used with only limited success. Special stuffing boxes and high-pressure pumps were installed, and several original ideas incorporated. The pressure method was soon discarded, as the walls of the hole were washed down and there was no end to cuttings. Some progress was made, but a veritable cavity was drilled in the loose shale.

The Texas Company also developed a special casing head for drilling with reversed circulation. Drilling mud was pumped down through the casing and returned through the drill pipe. This method was tried in an effort to gain volume in circulation, and at the same time to exert as much of the pump pressure as possible directly against the shaly formation. Circulation through the drill pipe had given mud greatest pressure where it was least needed. The reversed circulation increased bottom hole pressure, but returns through the drill pipe were not steady.

Humble Oil & Refining Company used an emulsion of oil and water as a circulating medium in drilling at Hitchcock, Galveston County, but it was not successful. The mixture was more effective when first circulated than after a period of use. The water and oil separated in the hole, and free water soon caused trouble. One of the objectives was to coat the particles of shale with oil and wash them from the hole in the usual manner.

Try Salt Solution

Humble Oil & Refining Company circulated with a saturated salt solution at Moss Bluff, but the practice did not solve the heaving shale problem in that area. Volume of shale entering the hole decreased with use of this circulating medium, but the fluid failed to carry out the cuttings.

Gulf Production Company also used a saturated salt solution at Fannett, but with little success. The mixture was too light to wash cuttings from the hole.

Sinclair Prairie Oil Company circulated with oil and chemicals in an effort to get through heaving shale at Boling Dome. The aim was to use a circulating medium that eliminated free water, while helping to keep the drill pipe free. Oil proved to be a poor cleasing medium, and the experiment failed. The oil did have a coating effect on the shale particles, but it did not have body enough to wash out the cuttings.

Use of a special wire line (collapsible) bit was very successful in drilling through heaving shale in Goliad County, Texas, two years ago. This bit was run on a string of 8⅝-inch external upset casing, the casing string serving as a drill stem. The bit head was screwed on and welded to the casing. When the collapsible blades were placed in position, they cut a 13¾-inch hole.

Purpose of using the special collapsible bit, with casing as drill pipe, was to eliminate necessity for coming out of the hole with full drill assembly while drilling in the heaving shale. After the shale had been penetrated and a safe formation reached, an overshot was run down through the casing to the bit head at the bottom of the combination casing-drill pipe string. The overshot gripped the spearhead above the collapsible blades and pulled these blades from the hole. The overshot was run on a wire line, the upward pull causing the blades to unlock, collapse and pass upward through the casing.

The special bit head became the casing shoe after the collapsible blades were pulled from their drilling position. The bit was run into the hole at 4200 feet, and drilling was continuous to 5144 feet, the maximum depth having been reached in a week. No serious trouble was experienced from heaving shale between 4200 feet and bottom. Drilling with this special bit was done after the hole had been previously drilled to about 5000 feet with ordinary bits and drill pipe. The original hole was partially lost, however, and it was impossible to run casing. Use of the special collapsible bit and casing as drill pipe solved the problem.

Mills Bennett Production Company is using a combination chemical and mechanical method of attack at Barbers Hill. The mud is being watched closely, while making a special effort to prevent excessive disturbance of the hole wall. Shale has been a troublesome factor in failure to drill deep tests in this field.

Extremely rapid drilling has been attempted in several areas, but trouble usually appeared when it was necessary to change bits or check circulation for some reason. In one field as much as 300 feet was made quickly, but pulling the tools from the hole caused the loss of two thirds of the hole made below top of the shale.

The heaves or caves in a few fields have been so bad that drill pipe could be rotated but could not be pulled from the hole. This indicated a bridged condition somewhere off bottom that was strong enough to check vertical movement of the drill stem and bit, but did not exert enough squeezing force to freeze the drill pipe. This condition has been experienced at Sheppards Mott, Vinton and West Columbia. The procedure has been to break the bridge through a reversal of circulation and constant movement of drill pipe. This has not always been successful, and many holes have been abandoned with tools in the hole.

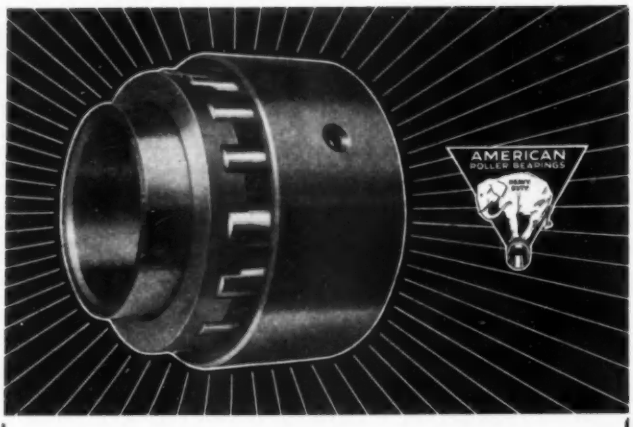
Carrying Casing

Carrying casing has been attempted in a dozen Gulf Coast areas, but it has not been a highly successful practice. One company succeeded in keeping casing a short distance above bottom while drilling ahead, but the string soon froze and could not be moved. Heaving and caving from above easily overcame the tendency of the casing to drop. The drill pipe was rotated with difficulty at times prior to running casing, and it should have been considered much more difficult to force the casing down.

Several pressure drilling methods have been tried, and some were successful to a degree. As soon as the pressure was relieved for any reason, shale gave trouble in fields presenting the worst problems. The arrangement was similar to that used in drilling under pressure to control a heavy gas flow. A back pressure was held against the well and a higher than ordinary pump pressure maintained.

Heaving shale cavities have been successfully cemented off, but full cementing off of a continuous stratum of the formation has not been accomplished.

A low fluid velocity has been tried at Vinton, Humble, Sheppards Mott and Green's Lake Bayou. The wall of the



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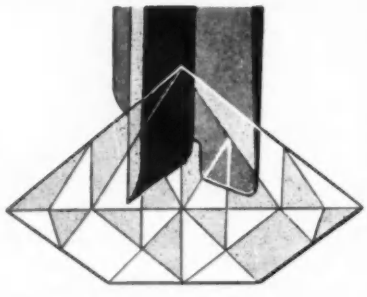

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hole was affected favorably by this practice, but slow movement of the fluid failed to wash cuttings from the hole. Heavy mud was substituted, but this fluid also failed to meet requirements with a slow motion.

The principal method of attack during the past two years has been through the mud column. Chemicals have gained favor and have been used for two purposes. The principal reason for their use has been to condition the drilling fluid, but in many cases an attempt to get a favorable reaction from the shale has been made. Accumulation of a sticky mass of shale on the drilling bit has been checked in several fields by use of chemicals that lowered viscosity of the drilling fluid.

Various chemicals have been used to control viscosity of the mud. Sulfuric acid, caustic soda, quebracho, sodium silicate, lime, sodium sulfate and several patented "starchy" minerals are in common use along the Gulf Coast and in other districts. The chief aim is to thin the mud without reducing its weight.

Yount-Lee Oil Company has been experimenting with a high concentration of colloidal materials to take up free water. As much as 10 percent of special admixture matter has been added where the shale seemed susceptible to water.

Humble Oil & Refining Company's research department has done considerable work on the theory that a chemical change takes place when the shale is disturbed and acted upon by water and mud. It has been considered a possibility that a solution to drilling through heaving shale in some sections may be found through chemistry. Some thought has been given to use of a chemical that will coat the shale particles and allow them to come from the hole otherwise intact. The company's drilling with a water-oil emulsion was based on this theory.

Heaving shale is also encountered in the Oklahoma Panhandle, California, West Texas, and several South American fields. Its characteristics are similar in all these districts, and a solution to the problem in one area probably will be applicable to other districts. The Buttonwillow area in California has not been explored fully because of heaving shale. It has been impossible to drill through several shale bodies in fields of South America.

In fighting heaving shale in Venezuela, Burmah, and in other foreign fields, adaptation of American methods has been common. Several South American fields remain only partially developed because of difficulty in drilling through these shale bodies.

Pressure drilling and mud control have been used with some degree of success in South America. These shales resemble American shales, and care to eliminate free water in the mud is exercised.

Use of a full oil string as drill pipe has been successful in fields near the Persian Gulf. When the shale is encountered the bit is screwed and welded onto the bottom of the oil string. Drilling is continued until the string freezes, or until it is necessary to stop for some other reason. The well is allowed to produce through the bit.

The Texas-Louisiana Gulf Coast has borrowed several ideas from foreign fields, and with certain refinements and improvements has adopted these methods to advantage. Large holes and fast drilling were developed simultaneously in Gulf Coast and foreign fields as aids in combatting heaving shale.

The problem has been given more thought along the Texas-Louisiana Gulf Coast than elsewhere, and developments in this area will be watched in the future with the hope that a solution will be found.

Structural Trends on the Gulf Coast

W. P. JENNY
Consulting Geologist and Geophysicist

PART II — Local Structures

THIS is the concluding article of a series of two on Structural Trends on the Gulf Coast by Dr. W. P. Jenny. In this article, the author states that the magnetic method may yet prove to be of considerable assistance in the search for local or semi-regional structures in the deep sedimentaries of the Gulf Coast and other similar areas.

***NOTE:** Due to requests received for copies of the maps that accompanied Part 1 of Dr. Jenny's article, published in the July 16 issue of The Oil Weekly, the author has announced he can furnish blueprints of such maps on a scale corresponding with the large Gulf Coast Map published as an insert in that issue at $3.00 per print.*

THE basic ideas of early Gulf Coast geologists as to a connection of local salt dome structures with regional structural trends are generally accepted today and are strongly supported for example by the alignment of the Five Island Domes and of the domes along the Southern Pacific Railroad in southwestern Louisiana.

Faults connected directly with the respective salt domes have been found by subsurface geology, by torsion balance, reflection and electric methods. Some of these faults assume a more or less regional character in so far as they are well pronounced and can be followed for considerable distances away from the respective domes.

The regional or semi-regional structural trends, along which the local salt dome structures occur, may reasonably be assumed to affect the magnetically active strata. As an example of the interesting information which may be gained by accurate magnetometer surveys on local Gulf Coastal structures, a map showing the torsion balance gradients, magnetometer data and magnetic profiles for the Iowa, Welsh and Roanoke prospects in Louisiana is shown in Figure I.

The gradients for Iowa and Roanoke have been published previously by the writer[1] and are shown here in order to

[1] W. P. Jenny, "Geophysical Prospecting in Gulf Coast District had to Overcome Many Difficulties," The Oil and Gas Journal, July 14, 1932.

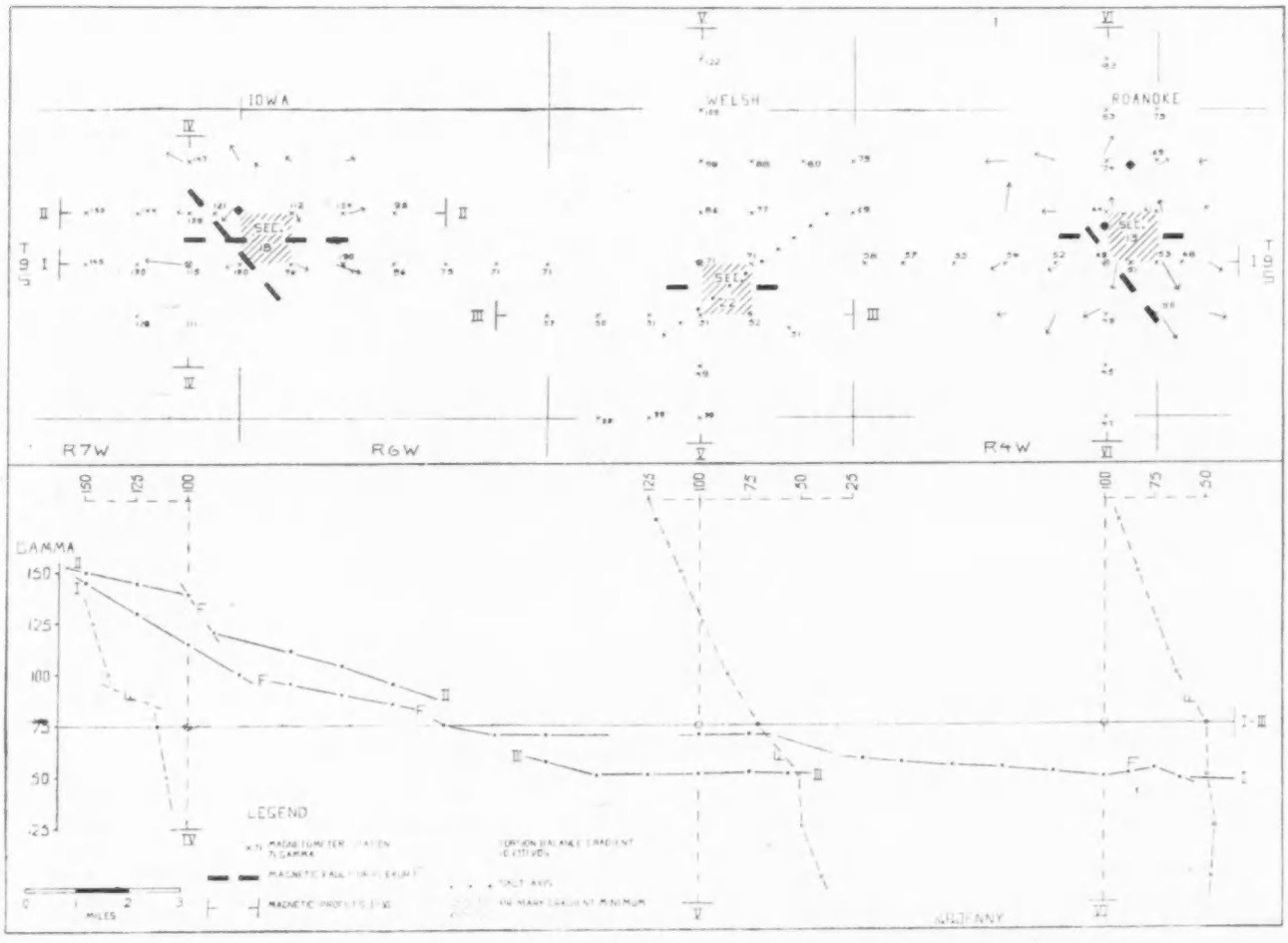


FIGURE 1. ***Torsion balance gradients, magnetometer data and magnetic profiles for Iowa, Welsh and Roanoke prospects, Louisiana.***

correlate the gravimetric with the magnetic results. The primary gradient minima, i.e., the minima without regional corrections of the gradients, appear for Iowa, Welsh and Roanoke in Sections 18, 22 and 13 of the respective townships. The Welsh prospect lies along a gravimetric minimum trend, which probably corresponds to a salt ridge.

The productive areas of both Iowa and Roanoke domes apparently lie to the northwest of the respective primary gradient minima. This circumstance might be connected in some way with the previously assumed flowage of the sedimentaries, which in this case should be directed toward the regional depression to the northwest. But, of course, there exist other more generally accepted explanations for the displacement of the gravimetric "high" from the structural "high."

The discussion of the magnetic results is best based upon the profiles contained in the lower part of the picture. Profile I, from west to east, has a uniformily steep dip for the first three miles and then a more gentle dip for the next two miles. The change in dip occurs in Section 18. Profile I appears to be flat in the Welsh prospect, similar to Profile III. For five miles to the west of Section 13 of the Roanoke prospect, Profile I exhibits a gentle uniform dip, which is interrupted and reversed in Section 13. Profile II shows a decided break a half-mile to the west of Section 18.

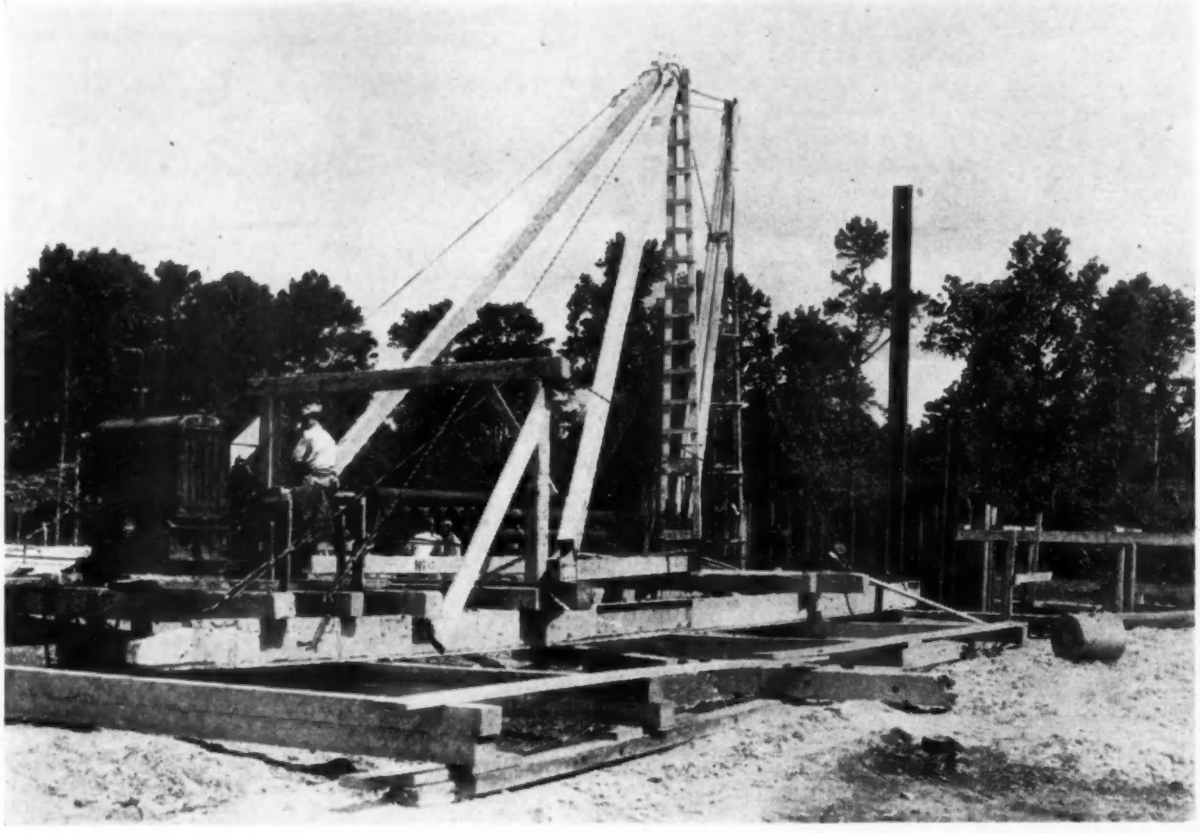
Profiles IV, V and VI all show a marked change in dip as they cross the respective prospects.

The writer is inclined to interpret the sudden changes in Profiles IV to VI as due to a flexure in the deeper strata. We may assume a flat ridge to the south, which drops abruptly toward a northerly depression. The breaks in Profiles I and II might correspond to faults, which may have initiated the salt flow into the shallower strata of the respective domes. It is interesting to note, that though these three domes are apparently lined up along a flexure, no common salt axis can be discovered but that on the contrary, the well pronounced gravimetric axis of the Welch prospect has a northeast-southwesterly direction and lies about parallel to the regional magnetic high trend some 10 miles farther northwest.

Whatever the correct interpretation may be, these sudden breaks of three and five mile long uniform magnetic dips must have a geological meaning and their association with the gravimetric minima of the respective local structures indicates that the magnetic method might yet prove to be of considerable assistance in the search for local or semi-regional structures of commercial interest in the deep sedimentaries of the Gulf Coast and other similar areas.[2]

However, it should be fully realized that magnetic measurements of the required accuracy represent some of the most difficult geophysical field work, which requires a thorough experience and utmost conscientiousness on the part of the observer.

[2]E. D. Lynton, "Some Results of Magnetometer Surveys in California," Bull. Amer. Assoc. Petrol. Geol., Vol. 15, No. 11 (November 1931).



Elaborate preparations were made for starting a test projected to go 10,000 feet in the Goose Creek field, Texas Gulf Coast. Derrick foundation and cellar construction encountered soil conditions which brought the cost of this preliminary construction above total cost of drilling and completing wells in the old days.

Buckeye Unit Plan *Overcomes* *Handicap of* Townsite Subdivision

EARL S. POST
District Editor

AN acreage unit plan, devised to provide a conservative and profitable development, has been put into practice in the Buckeye field, Matagorda County, Texas, by United North and South Development Company. Although there is a townsite, railroad right-of-way and 35 separate ownerships in the block to contend with, this company has worked out a plan whereby it will be enabled to space wells equal distances apart, regardless of ownership or property lines.

The most outstanding feature of the project is that it is practical and can be revised slightly to suit any field development, regardless of the number of land owners or lease holders.

In this instance, the operator is fortunate in having the acreage largely divided between two owners, the Charles G. Stoddard and the A. Plotner Estates. It, however, did have the Missouri Pacific railroad with its right-of-way crossing the 10,125-acre block to consider, as well as the owners of several small tracts and town lots.

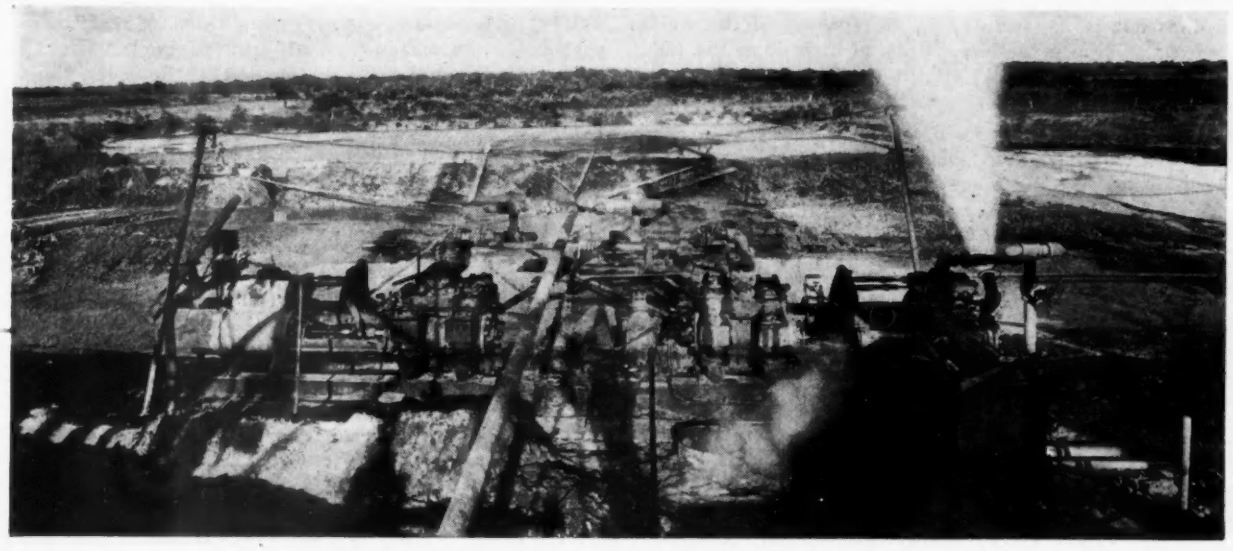
As far as the two larger land owners were concerned, it was a more or less simple proposition of working a plan of well spacing on 20-acre units, or 933 feet apart without consulting the land owners. Even with these big blocks, angular corners and odd shaped portions of the land made such spacing impossible in their entirety. Also, the railroad has a 100-foot right-of-way, and station grounds at Buckeye several hundred feet wide, which would cause drilling of closely located offsets. The townsite, likewise, would be a problem of virtually jamming derricks together to give each property owner his offset.

Early in 1932, while drilling was under way on Stoddard 1, discovery test, efforts were commenced to work out a block plan to overcome these obstacles in the event a producer was obtained. On August 31, 1932, the well blew in wild from 7951 feet, making several thousand barrels of oil and a large volume of gas daily. At that time the unit plan for development had been more or less perfected, but the contracts had not been completed fully.

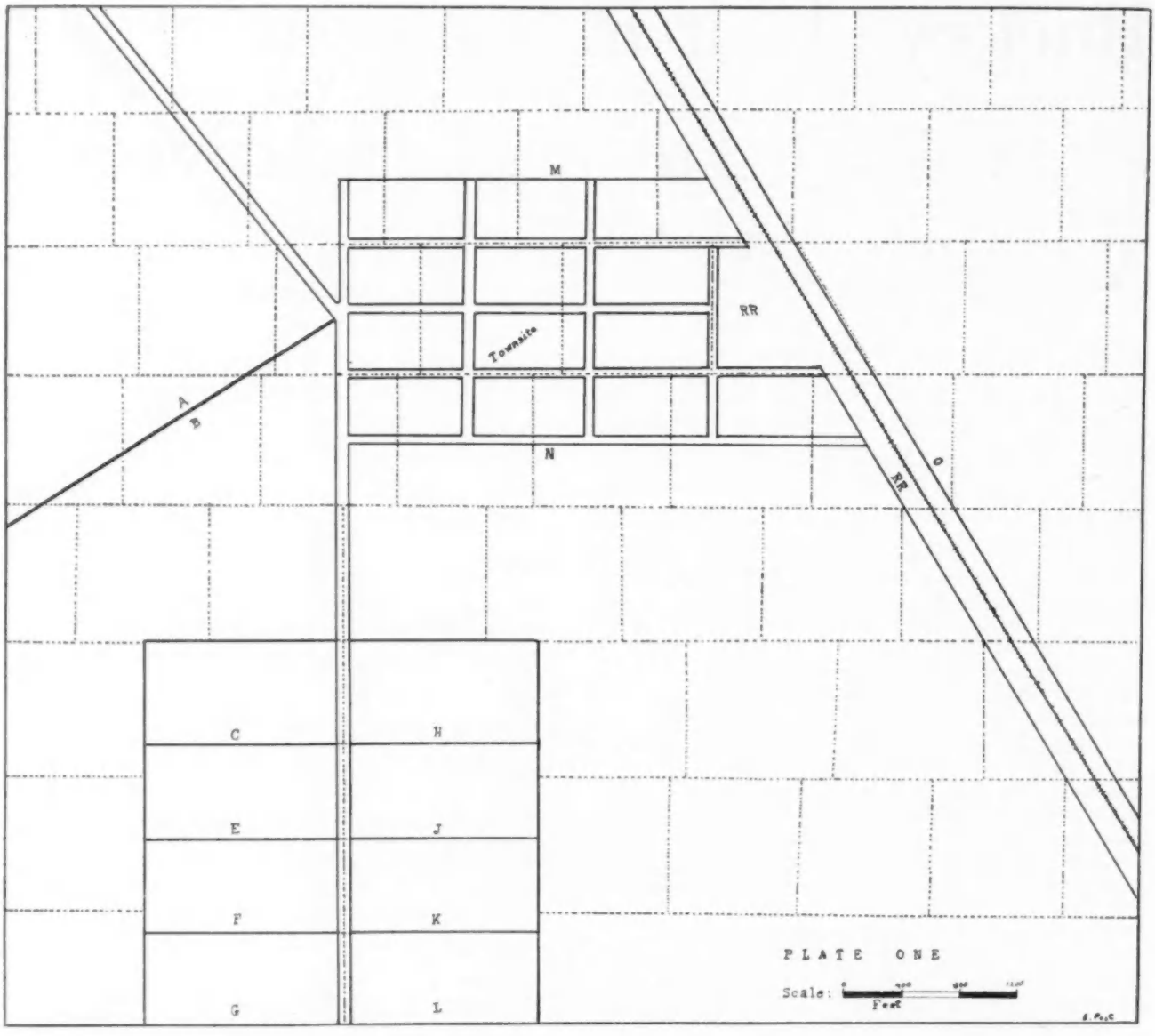
Three illustrations, completely explaining the United plan of unit operation, are presented with this article. These plans are hypothetical, and not direct copies of units at Buckeye. As a result, they show how easily this plan may be applied to any field.

Studying these illustrations one by one, the whole plan is unfolded. Plate 1 is a portion of a drilling block, covering nearly 1500 acres. This map could be extended to cover any size block and the additions would be similar to the portion represented. The letters A, B, M, N and O represent the owners of the larger tracts. Each dotted square indicates a 20-acre unit. The units in the central portions of the large tracts are not unusual, but are obtained by making locations 933 feet apart. The units along property lines, however, in cases, include more than one land owner. In these cases, each land owner is paid royalty in proportion to the quantity of acreage held. If a land owner has five acres and another has 15 acres in the particular unit, then the first gets one fourth of the royalty, while the other will receive three quarters of the royalty.

This unit plan is sufficiently flexible that it is not absolutely necessary for these units to be perfectly square. Tracts C, E, F, G, H, J, K and L, are 20-acre tracts,



Mud Pump on Deep Well Drilling at Buckeye



although oblong in shape, each constitutes a separate unit. This does not in any way affect the spacing of the wells, however, the agreement being only to drill upon the unit. The townsite and railroad shown in Plate 1 will be described later.

The most important consideration is offsetting. With unit blocks worked out as shown in Plate 1, the company can carry on a development campaign without being hampered by excessive offsetting. Offsetting rules still apply in a manner, but they have been partly dispensed with under this plan.

If adjoining units are owned by different property owners, production on one obviously will call for development upon the next within a reasonable length of time. One well, however, is all that is required to complete the contract unit. In addition, completion of a producer in any unit perpetuates all leases held on acres within said unit. In the case of a major portion of a unit being owned by one land or royalty owner, lease on all land outside of that particular unit and owned by that royalty owner will be perpetuated by completion of the well. This is figured on the basis of a drilling contract on a particular tract of land, just as if it were drilled on any other part of the lease.

Illustrating the above in Plate 1, a well drilled on any unit composed of property owned by A and B would perpetuate the leases on both owners' land. Where both interests are equal, this rule applies. If, however, the units are split up unequally, then the owner of the larger portion of the unit shall have his lease perpetuated by production. A producing well drilled on unit C would call for the drilling of a well within a reasonable time on unit E on the 933-foot spacing rule, each unit being owned by different royalty owners.

A second feature of this unit plan is that the units may be any size and the drilling thereon can be carried on as if each were a separate lease. If it is determined that 10 acres per well is necessary to properly recover all the oil, then four wells can be drilled to a 20-acre unit. If it takes only 40 acres to properly drain an area, then an original unit of 40 acres can be arranged. In the event of more than one well being drilled to a unit, the royalty owner gets proportionately from each well.

Should several companies hold leases in a block, the same unit plan could be worked out to embrace the lease as the royalty. For instance, company A owns lease on a 15-acre tract and company B owns a lease on a five-acre tract,

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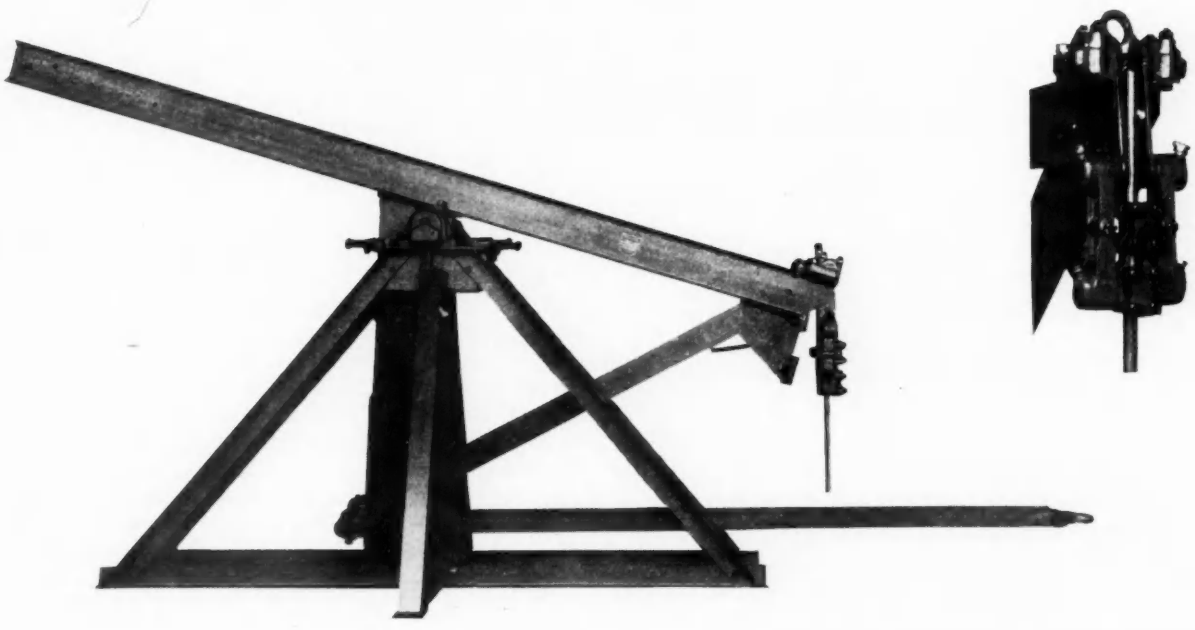

National Type D Jacks are designed and constructed for long stroke pumping of deep wells. All steel, arc welded construction which gives excess strength and extreme rigidity; extra large, enclosed bearings; adjustable position; variable stroke; approximate straight line motion; sand and water-proof lubrication—all are combined to provide economical installation, efficient operation and long, dependable service.

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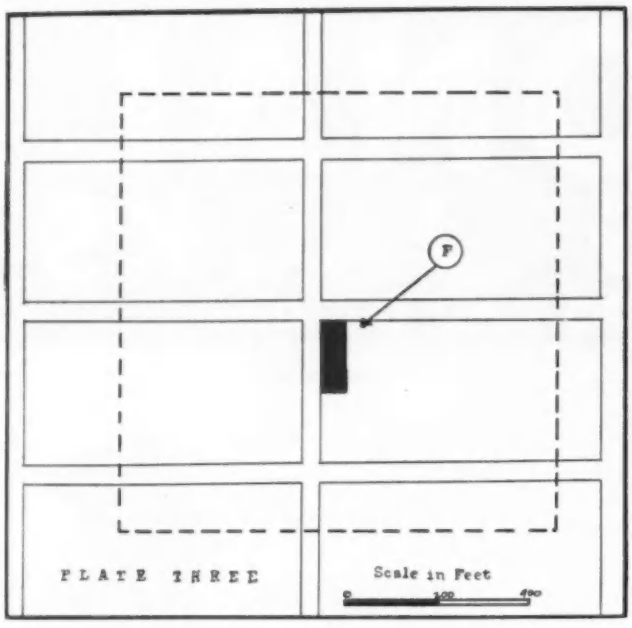
THE NATIONAL SUPPLY COMPANIES



both comprising the 20-acre unit. The division would be as follows:

Company A	¾ of ⅞ lease
Company B	¼ of ⅞ lease
Land owner A	¾ of ⅛ royalty
Land owner B	¼ of ⅛ royalty

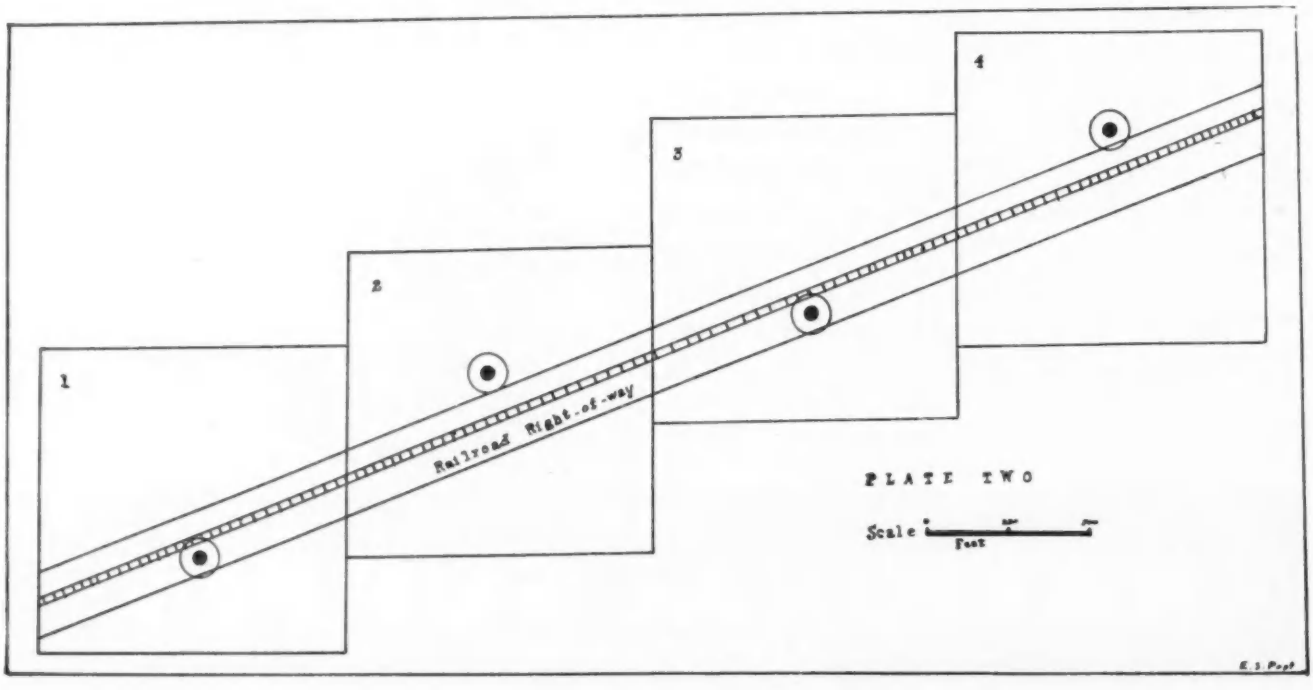
The operation of the lease could be determined according to the most economical plan. Such a plan of lease unitization between operators has not been confronted in the Buckeye development, hence, nothing has been worked out along this line.

Plate 2 shows the plan of handling the railroad problem at Buckeye. Assuming the railroad right-of-way is 200 feet wide and cuts through a single piece of property the problem shown in this plate is confronted. Only four wells are drilled on these four units under the unit plan, whereas a straight offsetting proposition would cause over-crowding.

To overcome the above problem, a series of 933-foot square units are planned along the railroad, the right-of-way running through the center of each unit. A contract is entered into between the railroad, land owners in these units and the operation company in which the alternate units are for the benefit of the railroad and the other units for the land owners. In other words, units 1 and 3 shown in Plate 2 are for the railroad's benefit, while units 2 and 4 are for the land owners. The railroad will not offset or drill in blocks 2 and 4, while the royalty owner will not require offsets in blocks 1 and 3. It appears as though the railroad is getting the greater benefit from this plan, but it must be remembered that the narrow strip can obtain as many, if not more tests for its acreage as the larger area. It would be a case of a string of wells in the center, or near the center, of its right-of-way and 933 feet apart, calling for the drilling of an offset on each side of the railroad only 200 feet from the well. Under this plan of waiving the right of offset in certain units by the railroad and in other units by the land owner, this situation is completely overcome.

Plate 3 solves a problem of great concern in many fields where small tracts and townsite lots are to be considered. It is merely a proposition of pooling acreage. Each land owner receiving royalty in proportion to the number of square feet of land owned. A unit is marked off, in this case 933 feet square, composing 20 acres. The entire unit plan was worked out through a series of contracts between the land owners, the railroad and United North and South Development Company. Blanket contracts were obtained from the large land owners covering the principal of the pooling plan and separate contracts were prepared to cover each unit, which was surveyed, described and numbered according to the entire plan.

Acknowledgement is made to B. M. Haberer and Parkman Sayward of United North and South Development Company, who played an important part in the working out of this plan of unit development and who assisted greatly in preparation of the material for this article.



Reconditioning *Work Modernizes* *Old Stanolind* Pipe Line System

FLOYD SWINDELL
District Editor

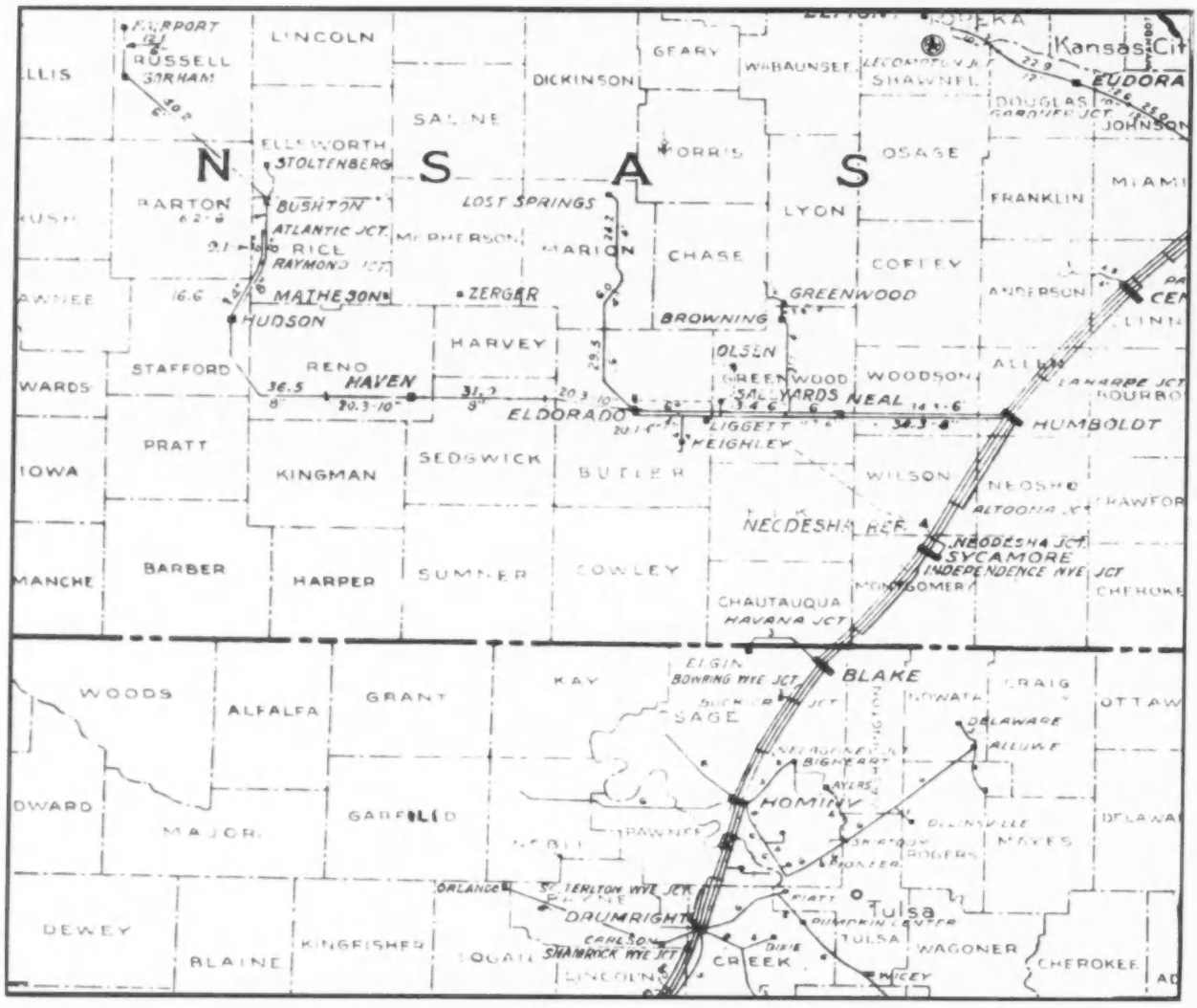
STANOLIND Pipe Line Company started running oil on July 2 through its new western Kansas system, the completion of which permits purchases made in the western portion of the state to be transported through company-owned lines to the refinery at Whiting, Indiana, or to intermediate points. In addition to being an important extension to the company's Kansas system, the work just completed is part of a plan to modernize older portions of its system. Generally speaking, the Stanolind Pipe Line Company system, like other of the older major systems, had its origin at a time when six- and eight-inch was the largest diameter pipe that could be used to withstand the working pressures then and now used. As it became necessary to increase capacity more loops of these sizes were added, with the result that a rather complicated system of parallel loops and cross-overs was developed. Most of this pipe was of the screw-joint type and much of it was unprotected.

Viewed in the light of present-pipe line design the system generally is not modern and the installation of such a system would now be condemned both from the standpoint of cost of installation and efficiency of operation. It is well understood by pipe line engineers that one 12-inch line, operating at the same pressure, will carry the same amount of oil through a given distance that three eight-inch lines would carry. Furthermore, in recent years improvement in the metallurgy of steel and in the design of pipe have made it possible to obtain pipe of larger diameter that will stand the customary working pressure with safety. Another modernization factor, of course, is the replacing of screw-joint pipe by girth welded joints. Both of these steps toward modernization were involved in the recent construction work.

Loosening Pipe in the Ditch

Work was commenced on April 7, 1934, on a plan which involved the taking up of 67.33 miles of six-inch and 149.52 miles of eight-inch loops in the main line between Hominy, Oklahoma, and Fontana Junction in Lynn County, Kansas, the replacement of these loops by 12 inch line, and the relaying of the old pipe in the system between Humboldt in Allen County and Atlantic Junction in Rice County. An accompanying table shows the amount of line taken up between various points on the main system and the number of miles of 12-inch line with which it was replaced.

The new line is composed of old six-inch and eight-inch pipe and new 10-inch over



Section of Oklahoma-Kansas where Stanolind Pipe Line Company's line conditioning work was done.

a distance of 185.45 miles. Line laid during recent construction work is shown in the table.

Some of the pipe removed from the main line between Hominy and Fontana Junction was laid in 1917 and some in 1923, the older, therefore, having been in the ground 17 years and the newer 11 years. Methods used in taking up the old line, cleaning, classifying and transporting it to the new locations, and the relaying of 216.85 miles of old line into the new system, constitute a unique accomplishment in pipe line construction history.

Uncovering of the old line was done largely by hand and the line lifted above ground level with tractor hoist. The method used in separating the line into joints is the result of considerable experimenting on various other projects. Each collar was split with one longitudinal cut so that the internal pressure against the collar caused it to spring apart slightly. The joint was then lifted so that it was jerked out of the collar, usually leaving the collar on the end of the joint still in the ditch. The joints were then hauled by truck to a central site where they were thoroughly cleaned and classified. Seven reconditioning sites were chosen for this work. In each case sites were chosen where slope of the ground enabled handling of the pipe with minimum of power other than man power. The highest point at each site was selected as the receiving

Lines Taken Up and Replaced

Points	Distance Miles	Taken up Mi. 6"	Taken up Mi. 8"	Replaced by
Hominy-Neloganey	12.42	12.42	24.84	12.42 Mi. 12"
Blake-Havana Jct.	13.67	13.67	27.34	13.67 Mi. 12"
Sycamore-Neodesha Jct.	3.20	None	6.40	Not replaced
Neodesha Jct.-Altoona Jct.	11.02	11.02	22.04	Not replaced
Chanute-Humboldt	10.08	None	None	10.08 Mi. 12"
Humboldt-La Harpe Jct.	13.52	13.52	27.04	13.52 Mi. 12"
Centerville-Parker Jct.	8.46	16.70	41.86	19.20 Mi. 12"
Parker Jct.-Fontana Jct.	8.24			
Total		67.33	149.52	68.89

New Lines Laid

Points	Length of Line Miles	Size Inches	Class of Pipe
Humboldt to Neal	34.80	8	Old
Eureka to Salyards Jct.	13.35	8	Old
Eureka to Salyards Jct.	3.50*	6	Old
El Dorado to Kechi Jct.	20.30	10	New
Kechi Jct. to Haven Sta.	31.00	8	Old
Haven Sta. to Arlington Jct.	20.30	10	New
Arlington Jct. to Raymond	53.10	8	Old
Raymond to Atlantic Jct.	2.50	6	Old
Raymond to Atlantic Jct.	6.60	8	Old

*Includes one mile cross-over at Salyards Junction.

point for pipe coming in from the old lines. Using old pipe for tracks, the pipe to be reconditioned was rolled by man power with the aid of gravity through the various stages of straighntening, cleaning and inspecting. Care was exercised, however, that slope of the ground was not great enough to create a hazard to the workmen. Pits were gauged with a new type of gauge recently patented by Stanolind Pipe Line Company, and each joint classified as to pit depth and general condition. Three classifications were used. Class A pipe was considered good; Class B pipe, usable; and Class C pipe, junk.

Due to the necessity of starting laying gangs on the reconditioned eight-inch and the uncertainty as to just how much usable pipe could be obtained from the old lines, it was deemed wise to use some pipe from stocks. Careful records were kept on all pipe removed from the old loops, including length of time buried, condition of the coating originally used and nature of soil conditions along the line. In the examination it was found that the greatest difference in condition of the pipe was between the coated and uncoated portions of the line rather than to the difference in length of time in the ground. The records which were kept are now being correlated and studied and should ultimately become a valuable addition to the knowledge of pipe line protection.

When the old pipe arrived at the reconditioning yards it was first passed to the straightening machine where all bends were eliminated. Old collars usually were removed as the pipe was unloaded. From that point it was passed to a traveling type cleaning machine which had been adapted to special use by being mounted on a stationary base. It was then carefully studied and classified. After being cleaned and classified the pipe was passed to the cutting crew which removed the old threads and beveled the ends in preparation for welding.

Beveling ends for welding

Transportation to locations along the new line was done by truck and rail, the pipe welded into sections and then into the line. After a final cleaning which was done with a traveling type cleaner, it was given a primer coat of cutback asphalt, a coat of special asphalt developed by the company, a coat of asbestos felt, and a final coat of asphalt. The line was then ready to be lowered into the ditch and buried. As much of the work as could be done economically with man power was done in that manner. Since more than 1000 men were at one time engaged in construction of the new line and taking up of the old loops, the job resulted in an appreciable contribution toward solution of the unemployment problem.

Straightening pipe in reconditioning operation

Canadian Operators *Endeavor To Find* New Petroleum Fields

CANADA has escaped many of the problems that have borne heavily upon the oil industry during the past years, having had no such surplus flood of production to contend with as some of her more prolific neighbors.

True, the Alberta government has found it necessary to curtail in some measure the flow of gas and crude naphtha from the Turner Valley field, but no other part of the dominion has been threatened with the spectre of overproduction and no new fields have exhibited a tendency to cause embarrassment in this respect.

The most interesting phase of development during 1933 has been the endeavor to develop new sources of supply and from the East to the Pacific Coast of British Colombia the wildcat driller has been active. In many instances the results have been negative but in some areas sufficient encouragement has been met to warrant further investigation by the drill.

Canada's total production for 1933 was 1,157,738 barrels, distributed as follows:

New Brunswick	8,676
Ontario	136,022
Alberta	1,013,040

Of the Alberta production 952,885 barrels was crude naphtha from the Turner Valley field, the remainder being light crude from the same source to the extent of 23,822 barrels, crude from the Red Coulee-Border field, 31,057 barrels, and heavy crude from Wainwright, 5276 barrels.

The total Canadian production showed an increase over 1932 of 103,365 barrels.

Natural gas production in the dominion during 1933 amounted to slightly over 23 billion cubic feet, practically the same output as in the previous year. This figure in all probability does not include surplus gas burned in Turner Valley after the extraction of the naphtha content.

This latter field continued to hold the limelight as far as Canadian development was concerned in 1933. Eight new wells were completed during the year, five of which produced crude naphtha and three light crude oil.

The naphtha producers included Sterling Royalties No. 1, with 400 barrels per day; Mar-Jon Freehold, with 330 barrels; McDougall-Segur No. 4, McLeod Oils No. 1 (after deepening) and Midfield No. 1 with lesser amounts.

Among the crude oil producers were Miracle Oil Company's No. 2, with 100 barrels daily; McDougall-Segur No. 6 and Model Oil Company's No. 2.

Gas production from these wells varied from three million to sixteen million cubic feet daily, the wells showing the largest output being situated in the southern end of the valley, which was the scene of greatest activity.

Of the wells completed only two were unsuccessful and at the close of the year 12 wells were actively drilling.

Decreasing well-pressures in certain parts of the field contributed to a lack of efficiency in the operation of the separators with which the wells are equipped to recover the naphtha content from the gas. To combat this Royalite Oil Company built and put into operation a high-pressure natural gasoline plant, capable of handling over one hundred million cubic feet of gas per day. A number of the older wells are now linked up with this plant and such is the efficiency of the process that the stripped gas which has to be burned through lack of a market is practically devoid of moisture. The plant has been so constructed that further units can be added as the necessity arises.

Through an exchange of stock a number of the independent companies have become associated with Royalite Oil Company, which assures a more efficient operation of these properties. An increase of production beyond the limits of the local demand entailed the shipping of naphtha to more distant points and this had a tendency to depress prices.

In an endeavor to curtail gas wastage the Alberta government instituted a certain measure of control, both of drilling and producing. Wells are only allowed to produce at 40 percent of their capacity and drilling into the limestone in which

the large gas flows are encountered was, for a time, prohibited.

A new outlet was found for surplus gas in the repressuring of the depleted sands in the Bow Island field. During the year five and a half billion cubic feet was utilized in this manner and the success of the experiment was indicated by an increase in well pressures from 248 to 450 pounds.

Outside of Turner Valley many structures in Alberta were tested by the drill. In the Twin River area the Nordon-Rooney well obtained a production of 25 barrels of oil per day and a gas flow of approximately eight million feet. Uncompleted tests were drilling in the Moose Mountain, Hunter Valley, Rickert, Watson, Wainwright, Athadome, Monarch, High River, Waterton Lakes and Reserve areas as the year closed. In the Red Coulee and Milk River areas certain wells were abandoned when drilling proved unproductive. At Fort Norman, on the banks of the Mackenzie River, the wells drilled in 1920-21 were opened up and a small plant put into operation for the benefit of river and aerial transportation and the mining activities at Great Bear Lake, N. W. T.

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Delivery of Oil to Turkey

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tions is considered by geologists as a simple extension of the first.

The two exploration wells drilled are nine miles apart. Operations are actually being conducted with much activity and considerable quantities of material are being ordered from Germany.

Uruguay

The total amount of exchange allocated to American oil interests in Uruguay during the first four months of 1934 for petroleum products was $430,680.00.

The Exchange Control Commission of Uruguay has stated that ordinarily it assigns the exchange granted for imports to the country of origin, but that in the case of petroleum products and possibly of certain other commodities, exchange would be charged to the quota of the country whose resources direct, finance, transport and sell the commodity in question, since such country obtains the greater part of the profits resulting from these operations. Because of the important position of petroleum products in the economy of Uruguay, exchange allocated for them is listed separately from that for other products.

It was only on April 9, 1934, that the Exchange Control Commission took over the distribution of the so-called "compensated exchange," which it had previously controlled only as to its use. Nearly half of the exchange granted for general imports, other than petroleum products, was in the form of "compensated exchange" (for which the buyer pays 40 percent more than for official exchange).

Nationalization in Mexico

Since a recent announcement in this publication of the intention to organize the Petroleos de Mexico, S. A., considerable interest has been shown in progress of that organization.

While still in the formative stage, this organization is only an enlargement of the activities of the National Petroleum Control Administration of Mexico, which has operated for several years as a subsidiary of the Government controlled National Railways of Mexico.

Petroleos de Mexico, S. A., is designed to act as the nucleus for a national petroleum industry, which is to be aided by increased burdens on foreign enterprises, such as the annual tax of 20 centavos per hectare on petroleum properties and the four percent absentee tax. The latter must be paid on the proceeds of the exportation of Mexican products, unless the value of such exports is reinvested in Mexico or used in purchasing merchandise or machinery for importation into Mexico.

Colombia

The Colombian Government has approved a two-year contract with an American geologist, whereby the latter is employed in the Department of Mines and Oil of the Ministry of Industries, according to American Minister Sheldon Whitehouse, Bogota, Colombia. The identity of the American geologist has not been announced.

Ecuador

Net production of crude petroleum in Ecuador, as reported by the Inspector of Mines, for the month of April, 1934, was 135,226 barrels.

Czechoslovakia

Czechoslovak petroleum production in March, 1934, amounted to 18,067 barrels as against 11,424 barrels during March, 1933, representing an increase of 58 percent, and 20,237 barrels during February, 1934, or a decrease of 11 percent.

Production of natural gas in March, 1934, was 111,621, as compared with 132,673 cubic meters during the preceding month, reflecting a decrease of 16 percent. The above figures are from Acting Commercial Attache Basil D. Dahl, Prague, Czechoslovakia.

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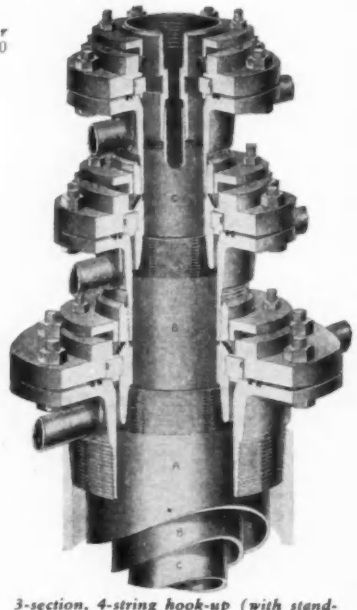

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MARKETS ~ STATISTICS

Better wholesale gasoline prices are posted in East Texas and other Mid-Continent points, but reports that some refiners in East Texas are not living up to stipulations in marketing agreement give fear that present prices may be undermined.

Prices Rise Further But East Texas Conditions Mar Outlook

THE oil industry's product prices continued to improve last week, extending betterment through a second consecutive week. The improvement has resulted largely from gasoline market stabilization plans on the Pacific coast and in East Texas. Another important favorable factor, meanwhile, has been a relatively successful program of crude production control, with Texas output cut back substantially in July as compared with June.

Beneath the apparently bright surface last week there was, however, an ominous undercurrent which carried with it potentialities for undermining lately achieved higher prices. That undercurrent was the "chiseling" that has developed among East Texas refiners in connection with the recently inaugurated program of surplus gasoline buying in that district.

Out of Washington came announcements during the week of oil administration approval of additional contracts covering purchases of surplus gasoline by large companies from East Texas refiners. The total buying was brought up by the new contracts to 26,200 barrels, and the refinery price on third-grade gasoline, the product primarily involved, had advanced to 3⅝ cents a gallon, from 3½ cents a week earlier. Prior to the surplus gasoline buying, that is, two weeks earlier, third-grade had been selling at 3¼ cents a gallon. The middle and first grades in East Texas had advanced similarly, rising to 4¼ and 4½ cents.

In the Oklahoma-Kansas region prices also rose an eighth cent last week, after having been unchanged for a month. The new quotations were averaging 3⅞ cents for third-grade gasoline, 4½ cents for middle grade, and 4¾ cents for first grade.

In so far as the East Texas prices were concerned, however, they represented a more or less artificial structure, built up and supported by the gasoline market stabilization program. Under the plan, large companies have agreed to buy surplus gasoline from the East Texas refiners and to provide market also for the latter's current output; while the refiners participating in the agreement are obligated to run only legally produced crude henceforth and to abide by gasoline production quotas allocated to plants by the oil administration.

THE OIL WEEKLY

Estimated Average Daily Production of Crude Oil, Barrels

District or State	Week Ending July 21	Week Ending July 14
TEXAS—		
Texas Panhandle	58,500	60,000
North Texas	58,000	58,000
West Central Texas	27,000	27,000
West Texas	142,000	140,500
East Central Texas	51,000	50,250
East Texas Field	466,000	459,000
South Texas	55,000	58,500
Texas Gulf Coast	167,000	166,250
Total Texas	1,024,500	1,019,500
OKLAHOMA—		
Oklahoma City	190,135	210,025
Seminole Area	129,450	133,350
Tatums	7,050	6,500
Lucien	8,475	5,880
Others	198,565	195,095
Total Oklahoma	533,675	551,050
KANSAS—		
Ritz-Canton	14,930	15,225
Voshell	6,750	6,885
Nikkel-Hollow	17,655	17,885
Sedgwick	7,050	7,000
Others	89,140	88,680
Total Kansas	135,525	135,675
LOUISIANA—		
North Louisiana	25,000	25,000
Louisiana Gulf Coast	70,000	70,000
Total Louisiana	95,000	95,000
ARKANSAS	31,500	31,000
CALIFORNIA—		
Long Beach	67,500	68,000
Santa Fe Springs	41,500	42,500
Huntington Beach	47,500	46,500
Dominguez	19,500	21,000
Inglewood	10,000	11,000
Ventura Avenue	28,000	28,000
Seal Beach	7,000	10,000
Midway-Sunset	57,000	58,000
Elwood	11,000	11,000
Kettleman Hills	76,000	66,000
Playa del Rey	9,000	9,200
Others	156,000	158,800
Total California	530,000	530,000
MOUNTAIN STATES—		
Wyoming	36,000	36,000
Montana	8,500	8,500
Colorado	3,500	3,500
Total Rocky Mountain States	48,000	47,500
NEW MEXICO	48,300	48,000
EASTERN STATES	105,000	105,000
MICHIGAN	32,000	32,000
Total United States	2,583,500	2,594,725

But out of East Texas have come reports that some refiners involved in the agreement are not keeping faith; that they are still operating largely on illegally produced crude; that they are ignoring code regulations, particularly crude throughput allocations; and that they are taking advantage of the surplus gasoline purchasers in connection with prices involved.

To help make the plan successful, the large companies have been willing to pay 3⅝ cents a gallon or better for the surplus material. But some of the refiners are reported to have obtained such prices from the large companies and then to have sold the remainder of their output to jobbers in tank car lots and to tank truck operators at prices as low as 3⅜ cents.

In some instances refiners have gone even further in jeopardizing the program, it is indicated, having disposed of their output and then gone into the market and bought cheap priced material to be submitted to the majors at substantial profits. The larger companies are apparently resigned to taking a lot of abuse in the hope of getting a troublesome situation ironed out, but they may be eventually driven by the above described conditions into shopping for cheap gasoline and thus into pulling down the current prices.

Bearing out charges that some of the East Texas refiners are violating their agreements and code restrictions, the Texas Railroad Commission's figures on crude runs to refineries in the district show a daily average of 68,570 barrels for the week ended July 16, latest available report, representing a gain of 8775 barrels in the daily average as compared with the previous week. Actually the crude throughput was higher, as a dozen or so plants in operation refuse to make reports to the commission, and minimum estimates are therefore used in such cases.

Some of the larger companies, taking all factors into consideration, placed estimates on "hot" oil production for last week at figures ranging from 65,000 to 80,000 barrels daily.

Retail gasoline prices were fairly steady throughout the country as a whole last week, including California

with its recently improved market under the marketing agreements for that region. But there were still some sore spots, including particularly North Texas metropolitan areas, which have had price wars more or less continuously for several months, aggravated no doubt by proximity of the habitually disturbed East Texas refining district.

At Fort Worth prices on third-grade gasoline were ranging last week from 11 cents a gallon for major companies to 10 cents for the lowest postings. In Dallas the price varied from 12 cents down to nine cents for third grade. Those low prices were rapidly spreading also to other sections of the state, including the towns of Sherman and Waxahachie.

Production Lower But Still Materially Above Allowable

UNITED STATES crude oil production declined about 11,000 barrels from the previous week's daily average in the seven-day period ending July 21, but was still 53,000 barrels above the national allowable as fixed by the federal government. The new rate of production was 2,583,500 barrels daily.

The above figures represent recorded production, and do not make allowance for "hot" oil, which is being produced principally in the East Texas. In that area conservative estimates indicate the illegal production last week to have averaged between 65,000 and 80,000 barrels daily. Thus the actual output of the United States in excess of the allowable was apparently around 125,000 barrels daily last week.

For that excess all of the leading oil producing states were partially responsible. Texas, Oklahoma, California, Louisiana, and Kansas were all above their quotas last week, although the latter was nearly within its allocation. The Texas recorded production was less than the allowable for that state, but "hot" oil in East Texas pushed the actual output above the allowable.

The decline in production from the previous week's level was possible because of an 18,000-barrel drop in Oklahoma output. That state's new average was 533,675 barrels daily. Despite the decline, however, the state remained considerably above its allowable, which is 489,500 barrels daily for July. Both Oklahoma City and the Seminole area registered declines in output.

Kansas production continued at almost the same rate as in the previous week, averaging 135,525 barrels daily, compared with an allowable of 134,500 barrels daily.

Louisiana continued above its 88,900-barrel daily allowable, averaging around 95,000 barrels per day in the new week.

California production continued virtually unchanged from the previous week's level, having averaged 530,000 barrels daily. The state's allocation by the federal government is 509,400 barrels daily.

Texas recorded production in the week of July 21 averaged 1,024,500 barrels daily, up about 5000 barrels from the previous week. The state is permitted 1,042,100 barrels production daily on the federal government schedule, but the allowable as fixed by the Texas Railroad Commission is lower, with recorded production conforming closely with the commission allowable. As indicated above, however, Texas actual production last week also included East Texas "hot" oil estimated at 65,000 to 80,000 barrels daily.

How Production Compares with Federal Allocation

	Allocation July	Week Ending July 21[1] Daily Average		4 Weeks, July 14[2] Daily Average	
Arkansas	33,000	31,500	−1,500	31,700	
California	509,400	530,000	+20,600	523,000	
Kansas	134,500	135,525	+1,025	131,250	
Louisiana	88,900	95,000	+6,100	91,650	
Texas	1,042,100	1,024,500	−17,600	1,058,350	
Oklahoma	489,500	533,675	+44,175	524,250	
New Mexico	46,600	48,300	+1,700	48,650	
Rocky Mountain	44,200	48,000	+5,800	47,900	
Appalachian States	108,900	105,000	−3,900	101,850	
Michigan	33,200	32,000	−1,200	31,200	
United States	2,529,300	2,583,500	+54,200	2,589,800	+50,875[3]
Imports crude and fuel oil				162,464	
Crude to Stills[3]				2,535,000	

[1]Oil Weekly estimate for current week. [2]A. P. I. estimate. [3]Allowable for June was 2,528,300 barrels, for four weeks 2,528,925.

Strike Causes Decline in California Consumption

THE port strike situation on the West Coast at San Francisco, Portland and Seattle is having a most serious effect on the general petroleum market. Service stations in the general San Francisco area, serving a total population of about 1,300,000 people, are closed, with the exception of a few key stations serving police, fire departments, National Guard, doctors, etc. The public cannot get service. The port strikes at Portland and Seattle make it unwise and dangerous to attempt to unload tankers. Hence most of the gasoline for that area is being moved in by tank cars from California.

The general strike in the San Francisco area is also affecting the consumption of fuel oils of all grades. Hotels, apartment houses and many industrial concerns are closed, insofar as the use of fuel oil is concerned. The strike is affecting outlying territory for many miles in every direction. Trucks moving farm products are idle in most instances.

Business is largely at a standstill. This serious situation has given oil companies something to worry over and officials are giving their undivided attention to the new phase. If the present conditions continue much longer a number of refineries will have to close down in the general San Francisco area as storage will be filled. Late reports from the district, however, indicate early settlement.

The Los Angeles area is not being affected to any real extent by the port strike. Los Angeles is generally known

Crude Runs to Stills; Finished and Unfinished Gasoline; Gas and Fuel Oil Stocks, and Cracked Gasoline Production, Week Ended July 14, 1934

(Figures in thousands of barrels of 42 gallons each)

DISTRICT	Daily Refining Capacity of Plants			Crude Runs to Stills		Stocks of Finished Gasoline			(a) Stocks of Unfinished Gasoline	(b) Stocks of Other Motor Fuel	Stocks of Gas and Fuel Oil	Daily Charging Capacity of Cracking Units			Cracked Gasoline Production
	Potential Rate	Reporting		Daily Average	% Operated	At Refineries	Bulk Term., in Trans. & Pipe Lines	Total at Refys., Term., etc.				Potential Rate	Reporting		Daily Average
		Total	%										Total	%	
East Coast	582	582	100.0	479	82.3	5,254	10,152	15,406	1,099	234	9,882	496	471	95.0	77
Appalachian	150	140	93.3	98	70.0	878	674	1,552	283	168	1,031	69	69	100.0	24
Ind., Ill., Ky.	446	422	94.6	349	82.7	5,065	2,967	8,032	1,222	41	3,827	325	309	95.1	98
Okla., Kans., Mo.	461	386	83.7	257	66.6	3,305	1,867	5,172	742	545	3,476	256	238	93.0	62
Inland Texas	351	167	47.6	109	65.3	1,013	86	1,099	274	430	1,580	82	66	80.5	29
Texas Gulf	566	552	97.5	471	85.3	3,653	205	3,858	1,706	238	7,597	358	355	99.2	94
Louisiana Gulf	168	162	96.4	108	66.7	641	543	1,184	231	.....	1,701	71	71	100.0	27
North La.,—Ark.	92	77	83.7	62	80.5	239	30	269	80	29	511	41	38	92.7	9
Rocky Mountain	96	64	66.7	35	54.7	930	.....	930	139	37	625	46	42	91.3	8
California	848	822	96.9	438	53.3	11,135	1,180	12,315	984	2,378	78,684	209	209	100.0	53
TOTALS WEEK: July 14, 1934	3,760	3,374	89.7	2,406	71.3	32,113	17,704	49,817	6,760	4,100	108,914	1,953	1,868	95.6	481
July 7, 1934	3,760	3,374	89.7	2,341	69.4	32,147	18,217	50,364	6,905	4,150	*107,121	1,953	1,868	95.6	459

Below are set out estimates of Crude Runs and Cracked Gasoline Production on B. of M. Basis for Week July 14, 1934 compared with July 1933 Bureau figures.

Estimate B. of M. Basis July 14, 1934	2,565		515
Estimate B. of M. Basis July 7, 1934	2,500		495
U. S. B. of M. July 1933: Daily Average Crude Runs	2,565	U. S. B. of M. July 1933: Daily Average Cracked Prod.	549

(a) Amount of unfinished gasoline contained in naphtha distillates.
(b) Estimated. Includes unblended Natural Gasoline at refineries and plants; also blended Motor Fuel at plants.
*Revised in East Coast District.

as an outstanding "open shop" city and for that reason it is not expected a general strike will be called. The port at San Pedro is working. Ships are being loaded and unloaded with little loss of time, and for this reason the sale of bunker fuel will show an increase at San Pedro in July

The gasoline price structure is holding fairly firm in the Los Angeles Basin area, with no increase in the number of service stations selling at cut prices. The crude production situation is fairly well in hand with an overproduction first half of the month about equal to previous months. But it is possible that the quota of gasoline permitted to be made in California may have to be slashed on account of decline in consumption due to the strike.

Empire Pipe Line Runs

Bartlesville, Okla.—Empire Pipe Line Company reports a total of 2,111,405.51 barrels or a daily average of 70,380.18 barrels receipts and total deliveries of 1,790,499.30 barrels or a daily average of 59,683.31 barrels during June, 1934. Stocks of the company at 7:00 a.m., on July 1, totalled 6,055,061.15 barrels.

Additional East Texas Surplus Gasoline Bought

Washington, D. C.—Additional contracts for the purchase of East Texas surplus gasoline were announced this week by Oil Administrator Harold L. Ickes. Six thousand barrels being taken by Standard Oil Company of Indiana, Humble Oil & Refining Company and Gulf Production Company from Taylor Refining Company, Alamo Refining Company, Goodson Refining Company and Constantin & Company. The latest purchase brings the total buying to date to 26,200 barrels, it was said.

Natural Gasoline Makers Must File Monthly Reports

Washington, D. C.—Producers and manufacturers of natural gasoline are to be required to submit monthly reports to the oil administration under orders issued July 17 by Oil Administrator Harold L. Ickes. These will provide more detailed information as to shipments than has heretofore been required.

The obtaining of additional data, it was said, will assist in gauging consumer demand.

Summary of Field Results During Past Week

State	Completions	Oil wells	Gas wells	Failures	Init. prod.
Arkansas	4	3	0	1	440
California	9	7	1	1	11,835
Colorado	1	1	0	0	3,024
Kansas	32	21	1	10	8,691
Kentucky	11	9	0	2	659
Louisiana	25	9	2	14	4,650
Michigan	8	3	0	5	1,235
Mississippi	1	0	0	1	0
Montana	8	5	2	1	415
New Mexico	3	3	0	0	16,680
Ohio	16	3	9	4	57
Oklahoma	56	37	1	18	14,371
Pennsylvania	20	8	8	4	158
Texas	235	166	6	63	563,471
Wyoming	1	0	1	0	0
Total	430	275	31	124	625,686

Comparison of Permits Granted for New Wells

State—	Week ending July 21	Total this month	Total this year	Total this date last year	1933 year total
Arkansas	3	5	48	28	47
California	6	36	307	298	593
Louisiana	16	51	427	345	755
Kansas	16	49	540	275	682
Michigan	11	28	247	153	420
Oklahoma	23	97	1184	519	1315
Texas	169	621	6844	3101	7845
Total	244	887	9597	4719	11,651

Excess Runs Threaten East Texas Market Plan

EAST Texas refiners and topping plant owners in some instances are hindering the successful application of the gasoline market stabilization program sponsored by the oil code administration through increased crude runs and refusal to abide by the various restrictions agreed to as a means of inducing major companies to buy up the surplus gasoline production. Only a few of the majors have lagged behind in furnishing shipping instructions on their allocated gasoline purchases.

Average crude runs to plants in the district increased about 9000 barrels daily during the past week. This gain in gasoline output is credited with being responsible for a spread amounting to as much as one-half cent per gallon in the price the majors pay for the gasoline and what it can be bought for from the same group of plants through brokers. Majors were paying 3⅞ cents per gallon for their contracted third grade motor fuel late last week, while spot sales by the small plants to nonmembers of the market stabilization program were made at prices ranging down to 3⅜ cents. To shorten this spread in prices plant owners must cut back their runs else majors must step up their purchase. Until some of the independents show more signs of acting in good faith the majors are likely to be reluctant to absorb more purchased gasoline at prices that are equivalent to a premium.

No punitive measures are being taken by the Texas Railroad Commission or the attorney generals department to check producers of illegal production. Operators having connections with lines serving refineries or topping plants is virtually free to produce up to his ability to market the oil except that the name of the violator and plant owner accepting such crude stands the risk of having its name posted on the commission's bulletin board at Kilgore headquarters. This publicity plan of exposing the market disturbing element was instigated last week by the Committee of bankers assigned to supervise the commissions tender meeting.

As abundant supply of crude tops are available in the field plants specializing in this method of disposing of "hot" oil were quoting 85 cents per barrel for tops testing above 52 gravity, while 44 gravity tops were quoted at 72½ cents per barrel F.O.B.

Allowable production of the field for the week ending July 16 averaged 467,025 barrels daily from 13,923 wells according to the records of the commission. During this period pipe lines extending from the field averaged 484,900 barrels daily, an increase of about 23,800 barrels in daily crude runs. The commissions estimate on crude runs to plants was placed at 68,565 barrels daily, an increase of about 9000 barrels, but no allowance was made for excess production the plants consumed without making an accounting for.

Gasoline Surplus Sellers Not Using "Hot" Oil

Washington.—Texas refiners whose surplus gasoline is being purchased by the larger companies under the administration's plan to ease the situation resulting from the accumulation of heavy stocks, are now not handling any illegal crude oil, according to a report received by Oil Administrator Ickes from E. B. Swanson, chief of the production division of the Petroleum Administrative Board.

Sellers of this gasoline are adhering to their agreements not to process "hot" oil, Swanson declared, advising the administrator that buying orders to date totaled approximately 315,000 barrels of gasoline, formal contracts for all of which have not yet reached Washington.

Contracts for an additional 14,200 barrels were today approved by the administrator, taken by the Gulf Refining Company and The Texas Company from four East Texas refiners.

Oklahoma Markets Are Up But Uncertain

OBSERVERS were in disagreement generally as to condition of the Mid-Continent market as the week came to a close with opinions on prices differing widely. While one group quoted the low octane U. S. motor grade for Group 3 territory at 3⅞ to 4¼ cents another group claimed that almost any amount of this material could be obtained on the open market at 3⅜ cents. A cross section of opinion on refinery gasoline showed the low octane, below 59 octane rating, quoted at 3⅞ to 4¼ cents; middle or 59 to 64 octane grades at 4⅜ to 4⅝ cents; and the premium or 65 and above octane at 4⅞ to 5¼ cents. These prices do not seem to represent the low at which motor fuels could be obtained except perhaps for the middle and high brackets.

Naturals were firm at a low of 2⅝ cents for the 26-70 grade. The burning oils with exception of kerosene were reported steady with a quotation of 2⅝ to 2⅞ cents for the 38 to 40 distillate and 2½ to 2¾ cents for the 32 to 36, dark straw, zero gas oils. Through the northern portion of the middle west which consums a large portion of products refined in the Mid-Continent area, the strike situation was one factor influencing jobbers in not entering the market.

Texas Petroleum Council Will Meet in Austin

Austin, Texas.—A meeting of the Texas Petroleum Council will be held in Austin on Monday, July 23.

At this meeting the annual reports of the officers will be heard and directors will be elected to fill vacancies resulting from resignations and other causes during the past year. Plans for work during the coming fiscal year will also be discussed at this meeting.

Texas Drilling Permits Total 169

Austin, Texas.—A total of 169 permits to drill new wells in Texas were issued by the Texas Railroad Commission last week. The week before only 125 were obtained.

North Texas continued to lead the state with a total of 46 permits, of which 28 were in Archer County.

There were 33 permits granted for wells in East Texas. Twelve were listed for Gregg County and the same number for Rusk County. In Upshur County five permits were reported, and there were four in Smith County.

The Panhandle and West Texas were well up on the list with 34 new wells. Nine were listed in Gray County alone.

There were 21 permits reported for Southwest Texas, scattered over several counties. The Gulf Coast operators obtained only seven, much fewer than usual.

An increase in the number of East Texas permits is anticipated during this week, as several have been approved by the examiners and are awaiting the signatures of the commissioners.

Crude Oil Price Quotations

(Figures Represent Basic or Flat Prices—Revised to July 20, 1934)

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Oklahoma-Kansas	28—$ .84	2¢	40—$1.08	9-29-33
N. and N.-C. Texas	28— .79	2¢	40— 1.03	9-29-33
Texas Panhandle				
Gray County	34— .79	2¢	40— .91	9-29-33
Carson-Hutchinson	34— .69	2¢	40— .81	9-29-33
West Texas				
Ector, Pecos, Wk'lr.,	*.75			9-29-33
Crane, Upton, Howard and Glasscock	*.70			9-29-33
East Texas	*1.00			9-29-33
Texas Gulf Coast				
Conroe	35— 1.09	2¢	40— 1.19	9-29-33
Tomball	*1.15			9-29-33
Cleveland	*1.00			1-11-34
†Goose Creek, Hull, Liberty, Orange, Pierce Junction, Moss Bluff, Raccoon Bend, Sour Lake, Spindletop, Sugarland, West Columbia, Humble, Rabbs Ridge	Below 20— .82	2¢	34— 1.12	9-29-33
South and SW Texas	Below			
Refugio (Light)	20— .82	2¢	34— 1.12	9-29-33
Refugio (Heavy)	.85			9-29-33
Saxet	*.83			9-29-33
Mirando	*.80			9-29-33
Pettus	*1.05			9-29-33
Salt Flat	*.87			9-29-33
Darst Creek	*.87			9-29-33
Arkansas				
El Dorado (Light) and Rainbow	29— .79	2¢	40— 1.03	3-17-34
Eldorado East Field and Smackover	*.70			9-29-33
North Louisiana	29— .79	2¢	40— 1.08	9-29-33
Urania	*.85-*.87			1- 1-34
South Louisiana	Below			
Lockport	20— .80	2¢	34— 1.10	9-29-33
Iowa, Cameron Mds.	Below 20— .70	2¢	34— 1.00	9-29-33
Rocky Mountain States				
Salt Creek	29— .84	2¢	40— 1.08	9-29-33

*All gravities—flat rate.
†Gulf Coast prices as posted by Humble Oil & Refining Company.

DISTRICT	Low Grav.	Dif.	High Grav.	Date
Elk Basin	$*1.17			9-29-33
Grass Creek (Light)	*1.17			9-29-33
Big Muddy	*1.01			9-29-33
Rock Creek	*1.02			9-29-33
Sunburst	*1.35			9-29-33
Lance Creek	*1.02			8-25-33
Osage	*.62			8-25-33
Cat Creek	*.45			8-25-33
Pondera	*.65			8-25-33
Hog Back, N.M.	*1.00			9- 8-33
Lea County, N.M.	*.75			9-29-33
Mid-West States				
Lima	*1.30			9-29-33
Illinois	*1.13			1- 5-34
Princeton	*1.13			1- 5-34
Western Kentucky	*1.17			9-29-33
California				
Signal Hill	14— .65	1¢	16—$ .66	9- 6-33
	17— .69	2¢	22— .84	9- 6-33
	23— .88	3¢	30— 1.09	9- 6-33
Seal B., Alamitos Hts.	19— .65	3¢	20— .68	9- 6-33
	21— .72	4¢	22— .76	9- 6-33
	23— .81	4¢	26— .93	9- 6-33
	27— .98	4¢	30— 1.10	9- 6-33
Huntington Beach	14— .65	4¢	15— .69	9- 6-33
	16— .72	3¢	19— .81	9- 6-33
	20— .83	3¢	28— 1.07	9- 6-33
	29— 1.09	3¢	30— 1.12	9- 6-33
Inglewood	14— .65	4¢	16— .73	9- 6-33
	17— .76	4¢	18— .80	9- 6-33
	19— .83	4¢	20— .87	9- 6-33
	21— .90	4¢	22— .94	9- 6-33
	23— .97	4¢	24— 1.01	9- 6-33
Playa del Ray	14— .65	1¢	15— .66	9- 6-33
	16— .69	4¢	17— .73	9- 6-33
	18— .76	4¢	19— .80	9- 6-33
	20— .83	4¢	21— .87	9- 6-33
	22— .90	4¢	23— .94	9- 6-33
	24— .97	3¢	25— 1.00	9- 6-33
			26— 1.04	9- 6-33
Olinda-Brea Canyon	14— .65	4¢	16— .73	9- 6-33
	17— .76	3¢	28— 1.10	9- 6-33
Athens-Rosecrans				
Domingues	23— .83	3¢	24— .86	9- 6-33
	25— .90	4¢	26— .94	9- 6-33
	27— .97	3¢	29— 1.04	9- 6-33
	30— 1.08	4¢	31— 1.12	9- 6-33
			32— 1.15	9- 6-33
Elwood (fob ship)	33— 1.03	3¢	37— 1.15	9- 6-33
Torrance	14— .65	1¢	15— .66	9- 6-33
	16— .69	3¢	20— .81	9- 6-33
	21— .83	3¢	26— .98	9- 6-33

*All gravities—flat rate.

DISTRICT	Low Gra.	Dif.	High Grav.	Date
Richfield	15—$ .65	2¢	16—$ .67	9- 6-33
	17— .70	4¢	20— .82	9- 6-33
	21— .85	4¢	22— .89	9- 6-33
	23— .93	4¢	24— .97	9- 6-33
	25— 1.00	4¢	27— 1.08	9- 6-33
	28— 1.11	4¢	29— 1.15	9- 6-33
Whittier-LaHabra	15— .65	3¢	18— .74	9- 6-33
	19— .78	3¢	24— .93	9- 6-33
Montebello	19— .65	1¢	20— .66	9- 6-33
	21— .69	3¢	22— .72	9- 6-33
	23— .76	4¢	24— .80	9- 6-33
	25— .85	4¢	26— .89	9- 6-33
Coyote Hills	16— .65	3¢	19— .74	9- 6-33
	20— .78	3¢	29— 1.05	9- 6-33
	30— 1.09	3¢	34— 1.21	9- 6-33
Santa Fe Springs	21— .72	4¢	22— .76	9- 6-33
	23— .79	4¢	25— .87	9- 6-33
	26— .90	4¢	28— .98	9- 6-33
	29— 1.01	4¢	30— 1.05	9- 6-33
	31— 1.08	4¢	33— 1.16	9- 6-33
	34— 1.19	4¢	35— 1.23	9- 6-33
	36— 1.26	4¢	38— 1.34	9- 6-33
New Hall, Mckittrick, Kern River	14— .57		19— .57	9- 6-33
Midway Sunset, Elk Hills, Buena Vista Hills	17— .57	4¢	18— .61	9- 6-33
	19— .64	3¢	22— .73	9- 6-33
	23— .77	4¢	33— 1.17	9- 6-33
Lost Hills	17— .57	4¢	21— .73	9- 6-33
	22— .76	3¢	30— 1.00	9- 6-33
Coalinga	17— .57	1¢	18— .58	9- 6-33
	19— .62	3¢	21— .68	9- 6-33
	22— .72	3¢	25— .81	9- 6-33
Wheeler Ridge	17— .57	1¢	18— .58	9- 6-33
	19— .61	3¢	25— .79	9- 6-33
Kettleman Hills	33— .93	3¢	39— 1.11	9- 3-33
Pennsylvania				
Bradford	*2.25			4- 1-34
Sw Pa., Pipe Line	*2.22			4- 1-34
Eureka Pipe Line	*2.17			4- 1-34
Buckeye Pipe Line	*2.07			4- 1-34
Corning Grade	*1.20			9-11-33
Michigan				
Central Michigan	*1.20			9-30-33
Muskegon	*.70-1.00			12-31-32
Canada				
Petrolia	*2.10			9- 9-33
Oil Springs	*2.17			9- 9-33

*All gravities—flat rate.

MAJOR PRICE CHANGES

	Penna. (Nat. Tr.)	Mid-Cont. (36 Gr.)	Calif. (26 Gr.)
March 5, 1933	.....	.....	Cut 24¢
May 2, 1933	.....	Cut 19¢	.....
May 9, 1933	Cut 20¢	.....	.....
May 22, 1933	Up 10¢	.....	.....
June 19, 1933	Up 10¢	Up 19¢	.....
June 26, 1933	Up 10¢	.....	Up 9-12
July 6, 1933	Up 13¢	Up 10¢	.....
July 17, 1933	Up 15¢	.....	.....
July 28, 1933	Up 15¢	.....	.....
August 11, 1933	Up 10¢	.....	.....
August 24, 1933	.....	Up 10¢	.....
August 30, 1933	Up 15¢	.....	.....
September 6, 1933	Up 10¢	Up 10¢	Up 15¢
September 8, 1933	.....	Up 15¢	.....
May 1, 1934	Up 10¢	.....	.....

CRUDE PRODUCTION TAXES

Oklahoma—Three percent of gross value less royalty interest.

Texas—Two cents or 2 percent, whichever is higher.

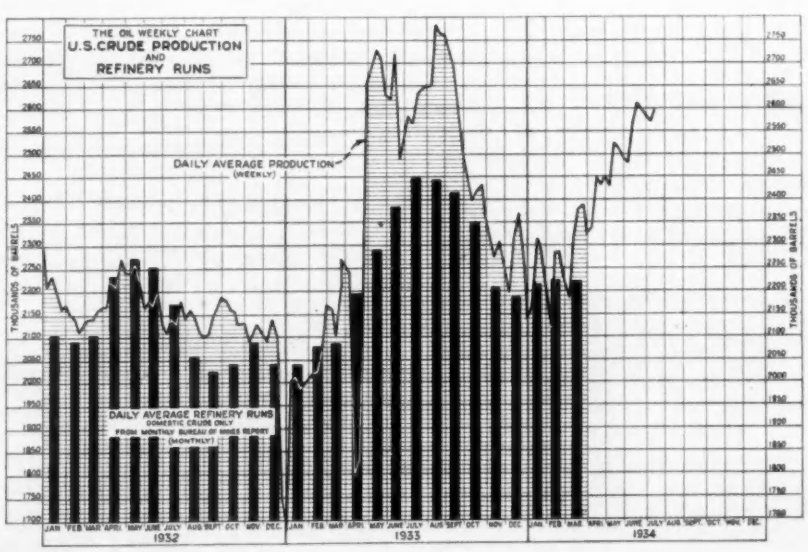
Louisiana—From four to 11 cents a barrel, depending upon gravity.

Arkansas—2.6 percent of gross market values.

Montana—Three percent of gross value at well and ½-cent per barrel.

Wyoming and New Mexico—Production tax based upon state and county assessments.

California—.66443 mills per barrel of oil produced and 17.39 cents per acre on proved oil lands.



MEN IN THE INDUSTRY'S NEWS

HARRY H. POWER, chief engineer for Gypsy Oil Company, has been named chairman of the Mid-Continent division of the topical committee on development and production research of the American Petroleum Institute's central committee on drilling and production practices.

R. F. FIKE, superintendent of the motor transportation division of Mid-Continent Petroleum Corporation, has returned to headquarters in Tulsa after visiting marketing divisions in 13 middle-western states.

HERBERT F. BEARDMORE, engineer for Indian Territory Illuminating Oil Company in the Oklahoma City field, discussed the theory and application of gas-lift to Oklahoma City wells at the July 16 luncheon meeting of the Oklahoma City Geological Society.

B. I. THORNGREN has been appointed sales engineer for Maintenance Engineering Corporation, Houston. He will be directly engaged in water conditioning work, both in stationary plants and marine operation. Mr. Thorngren received his B.S. degree from the University of Texas in 1928 and his M.S. degree in chemical engineering from the same institution in 1930. He was formerly connected with Magnolia Petroleum Company in the technical service division.

F. C. EMBSHOFF, formerly general office manager for Shell Petroleum Corporation in Tulsa, has been transferred to a similar position in Houston. Mr. Embshoff is now on vacation in California and will arrive in Houston the latter part of this month.

ROBERT F. PIELSTICKER, son of the late F. A. Pielsticker who was vice president in charge of refining for Skelly Oil Company, has been made crude oil purchasing agent for Skelly Oil Company with headquarters at El Dorado, Kansas.

KAY A. GARRISON, formerly in the scouting department of Skelly Oil Company and now an independent operator with headquarters in Houston, was a Tulsa visitor during the week.

O. E. BERG has been appointed district sales manager for Allegheny Steel Company, Brackenridge, Pennsylvania, in the southwestern territory with headquarters in Houston, Texas.

FRANK BRAMAN, National Tube Company, Tulsa, is in West Texas aiding in the running of 10,300 feet of 7⅝-inch pipe in Gulf Production Company's McElroy 103, Upton County.

M. L. MAYFIELD, mechanical engineer, has been transferred recently to the Seminole office of The Empire Oil & Refining Company, where he will assist the district production engineer.

HAROLD VANCE of Kilgore, prominent in petroleum production work over the country for several years, has been appointed head of the department of petroleum engineering at Texas A & M College, according to Dean F. C. Bolton. He will relieve Prof. R. L. Mills, acting head of the department, who resigned early this summer. The appointment is effective September 1.

A graduate from the University of California in petroleum engineering in 1923, Prof. Vance has been division production engineer for a number of leading oil companies and has had practical field experience in drilling and production methods in Alaska, California, Wyoming and in West and East Texas fields. He has been connected with the U. S. Bureau of Mines and with the U. S. Coast and Geodetic Survey, and now is on the civil service list as a senior petroleum engineer. Since 1929 he has been a member of the Vance-Feagan Engineering Company.

DR. VICTOR GABRIEL will begin a series of eight lectures at the Houston public library July 23 on "Geophysical Exploration for Oil." The series will cover principles and interpretation of the torsion balance and magnetic and seismic surveying. They will be given a non-mathematical treatment.

H. W. CARDWELL, president of All-Steel Products Company, Wichita, spoke on the subject of "Tubing Feet Per Minute in Servicing Wells" at the regular monthly meeting of the Kansas chapter of the American Petroleum Institute's division of production, which was held in McPherson, Kansas, July 13. The program also included comment on current events and world problems by Josh Wilson of the Wichita Beacon editorial staff and a symposium on the present trend of surface pumping equipment in Kansas fields.

Deviation Rule Test Is Taken Under Advisement

Austin, Texas.—A test of the deviation rule of the Texas Railroad Commission currently in effect in the Conroe field, Montgomery County, resulted from a trial in Austin last week.

Adeltex Oil Company purchased a well that had been completed in salt water. They whipstocked out and drilled the hole at an angle, so that it was bottomed some 300 feet north of the surface location, near a lease of the Sun Company.

At a hearing before the commission, representatives of the Adeltex Company admitted that the deviation was intentional, and that this was the method they had chosen to complete the well, the Llewellyn No. 2, as a producer.

Sun Oil Company contended that Adeltex had violated the deviation rule of the commission, which forbids a deviation of more than five degrees from the vertical in wells drilled at Conroe, and contended further that the rule meant unintentional deviation.

Adeltex argued that although the well did deviate more than five degrees at some intervals, the total deviation from the surface to the bottom of the hole was less than five degrees. They pointed out that the rule made no mention of whether such deviation was intentional, and contended that so long as the variation was within the requirements of the rule, this question was of no importance.

The commission, however, took the view of the Sun Company and ordered Adeltex to straighten the hole. This they declined to do, and enjoined the order of the commission in the 98th District Court of Travis County.

At the trial of the case on its merits, Adeltex attorneys produced an opinion from Lon A. Smith, chairman of the railroad commission. After thoroughly reviewing the case, Commissioner Smith said in part:

"It is my opinion that no violation of the spacing rule (Rule 37) or of Rule 20 (the deviation rule) has been shown to have been committed by Adeltex Oil Company.

"On the contrary, it is my opinion that the Adeltex has taken care to and has actually satisfied the requirements of both of these rules.

"The rule is understood by me to grant a fixed maximum allowance, irrespective of intent."

This opinion was given the Adeltex on May 1, 1934.

At the conclusion of the trial, Judge J. D. Moore announced that he would take the case under advisement.

HIGH SPOTS IN BRIEF

Number of active drilling operations throughout the United States dropped sharply during the week as revealed by volume of completions against new starts. Of the former there were 430, of which 275 were oil wells with initial estimated at 625,686 barrels. Texas had the usual lion's share in these statistics. New wells started dropped to 244, largely influenced in some parts by the drought which is becoming serious in some producing sections, especially in the western end of the Mid-Continent.

Oklahoma

Completion of a 115-barrel per hour producer has definitely proved the Polo area of Noble County productive and opened a new field. The second completion in the Edmond pool, north of Oklahoma City, has resulted in a 50,000,000 cubic foot flow with tools lost in the hole. Finding of Wilcox sand production on the flanks of the old Wewoka and Fish pools, Wewoka district, is expected to result in considerable activity. Oil production has been found in the 12-year old Chicasha gas field.

Gulf Coast

The new Bosco field, Acadia Parish, Louisiana, has been extended 2500 feet west, which adds to its growing importance. Ten new wells have been started in this promising field; activity and interest in southern Louisiana is on the increase.

In Texas, a test on the southeast flank of the Boling field is showing oil at 4399-4424 feet. It is believed this is the upper Frio, which openes a new pay for field. The Manvel field, Brazoria County, was extended 800 feet south during the week. The Livingston field, Polk County, was extended three quarters of a mile north.

South Texas

The Jacob field has been extended more than one half south, which gives indications that it may eventually be linked with the old Calliham pool. The second completion in the West Tuleta pool, Bee County, is a better producer than the discovery well. A test that appears to be one of the best producers in the Cedar Creek field, Bastrop County, would extend the pool one half mile north. New developments in Refugio County are indicative that the Greta and Fox pools may be connected through a series of spotted producing lenses. The Coletto field, Victoria County, has been proved productive in the 2800-foot zone, also a new producing horizon at 2200 feet has been found, which brings this region into the limelight. The new fields, Sinton and Angelita of San Patricio County, and Vanderbilt of Jackson County, will soon have additional completions, which will further determine their producing importance.

California

A new producing field has been opened by Santa Barbara County by a well making 75 barrels on the pump. The new Mountain View field will probably be extended as an outpost test has cored 30 feet of saturated sand. The field, however, still remains questionable.

Rocky Mountain

The first deep test in the West Mule Creek field, Wyoming, has encountered oil at 2840 feet. The test is located three quarters of a mile southwest of shallow production. A well flowing 3024 barrels initially has been completed in the East Illes Dome field, Moffat County, northeastern Colorado.

East Texas

The Cayuga field was partly defined to the northwest last week; at the same time it was extended slightly to the southeast by a 3000-barrel producer. Completion of a failure in the Van field further bears out the belief that a narrow barren strip runs across the north half of the pool. The eastern limits of the north edge of the East Texas field were further defined during the week.

North Louisiana-Arkansas-Mississippi

A test one quarter mile northeast of nearest production in Bossier Parish, Louisiana, blew out when it encountered a flow estimated at 6,000,000 cubic feet of gas.

Restoring Natural Gas In Ground Practical

Dallas, Texas.—Recent additional tests have established the practical usefulness of the method originally suggested in April by Frank L. Chase of Dallas, Texas, for restoring natural gas back into the ground as a means of preventing a daily wastage of one billion cubic feet of gas a day in the Texas Panhandle. Mr. Chase is vice president of the Lone Star Gas Company and chairman of the Natural Gas Department of the American Gas Association.

The wastage of natural gas in the Panhandle field is the result of a state law, commonly called the "sour gas" law, which permits gasoline stripping plants to extract natural gasoline from gas and blow the residue, about 97 percent of the heating value, into the air. Of four trillion cubic feet of gas produced, three trillions have been permitted to go to waste, according to the best estimates. To reduce this astronomical figure to an understandable basis, the wasted gas would heat Texas homes and cook Texas meals for 77 years, at the present rate of consumption.

As an important step in the solution of this appalling waste, Mr. Chase suggested that the residue gas should be returned from the stripping plants back into the ground. His idea was put to prompt and successful demonstration in Wheeler County, Texas, where engineers of the Lone Star Gas Company returned 100 million cubic feet of gas into the ground in six days without mechanical pressure. Subsequent tests added to the success of the original experiment.

"When we offered restoration of gas to the ground as a solution of the wastage problem in Amarillo last April, we had only a theory," Mr. Chase reports. "Now we have proven by actual experience that restoration is practical. We believe it is the one thing which will solve the prodigal wastage of a valuable natural resource in this state."

Representatives of gas companies in Texas and Oklahoma, and E. L. Rawlins, chief natural gas engineer of the United States Bureau of Mines, met recently in Dallas to study data obtained from the gas restoration method. Mr. Rawlins said he would seek immediate approval of his plans for further experimentation from Bureau of Mines officials in Washington. In the tests carried on to date, gas was forced back into the ground with natural pressure of the field. Subsequent experiments will be conducted with mechanical compression of a much higher pressure.

Commenting editorially on waste of gas in the Panhandle, the St. Louis Post-Dispatch says:

"We call attention to this situation to illustrate the daffiness of our civilization. To the city of St. Louis, hardly habitable during the winter because of the smoke pall from soft coal, cheap natural gas would be a godsend. Yet in Texas it is being blown to the winds, irrevocably lost. For what purpose? To obtain a half gallon of gasoline per thousand cubic feet of gas. And the trouble with the gasoline business is that it is cursed with over-production. It all just doesn't make sense."

June Fuel Oil Shipments From California Increase

Los Angeles.—Fuel oil shipments from California to the Atlantic seaboard not only increased in June, 1934, compared with June, 1933, but prevented a drastic decline in offshore shipments for the comparable periods. Pacific foreign gasoline shipments dropped nearly 9000 barrels daily, partly offset by an increase in tanker crude shipments approximating 6500 barrels daily.

Analysis of the preliminary estimates of offshore tanker shipments, just issued by Oil Producers Sales Agency, shows that fuel shipments by tanker to Pacific foreign ports, Atlantic foreign ports, and Atlantic seaboard ports, helped maintain the status quo of steady monthly increases since the first of the year, with Atlantic seaboard shipments showing the greatest increase from 2432 to 47,096 barrels daily.

For the six months period, January-June, 1934, compared with the same period in 1933, Pacific foreign shipments increased from 98,667 to 108,742 barrels daily; Atlantic foreign declined from 10,191 to 7916 barrels daily; and intercoastal (Atlantic seaboard) increased from 44,762 to 79,126 barrels daily—the general average barrels daily increase being 42,164.

For this same six months period, declines have been constant to all offshore districts for gasoline tanker shipments. While the money value to California has remained relatively constant, with the change in products shipped, gasoline tanker shipments Pacific foreign have declined from 22,978 to 19,802 barrels daily; Atlantic foreign from 7700 to 2100 barrels daily, and Atlantic seaboard from 27,700 to 20,555 barrels daily.

Converse Field Acreage Is Sold

Shreveport, La.—Arcadia Refining Company for a consideration of $20,000 out of first half of production has assigned to Florence Oil Company leases totaling 160 acres being NW quarter of SE quarter and northeast quarter of southeast quarter Section 16-9n-13w, Converse field, Sabine Parish. The transaction calls for immediate drilling of two tests.

Importance Attached to Two Wewoka Area Strikes

Wewoka, Okla.—Finding of Wilcox sand production on the flanks of the old Wewoka and Fish pools has brought a new importance which may mean considerable drilling in these areas. In the Fish area Blackwell Oil & Gas Company logged Wapanucka limestone from 2990 to 3060 feet and swabbed 575 barrels in 24 hours from Ferguson 1, C NW SW SW Section 29-7n-8e. The same operator was digging cellar and pits for Ferguson 2, C SW NW SW Section 29-7n-8e, north offset to Ferguson 1. Stanolind Oil & Gas Company et al's Sarkey 1, C NE NW SE Section 31-7n-8e, topped Gilcrease sand at 2915 feet and cored a small showing of oil from 2920 to 2946 feet. Champlin Refining Company made location for No. 1, C NW NW NW Section 32-7n-8e, and had rig on the ground for No. 1, C SE NE SE Section 30-7n-8e.

Wewoka Area

Standard Oil Company of Kansas' Community-Trust 1, C SE NE NE Section 28-8n-8e, Wewoka district, topped Hunton limestone at 3992 feet, cored showings of oil at 4020 to 4026 feet and 4056 to 4082 feet, and topped Sylvan shale at 4112 feet. Late in the week top of the Viola limestone was reported topped at 4165 feet and operators were preparing to core the Wilcox sand. Amerada Petroleum Corporation et al's No. 1, C SE SE NW Section 27-8n-8e, slightly over a half-mile to the southeast, topped Sylvan shale at 4091 feet and was drilling below 4130 feet, still in Sylvan. Reports state that other tests are planned for the two areas in the near future.

Shawnee Test Holds Seminole Interest

Shawnee, Okla.—Stanolind Oil & Gas Company and Amerada Petroleum Corporation were bailing Goodman 1, C SW NE NE Section 5-10n-4e, less than a mile northeast of here. Operators cored from 4405 to 4450 feet recovering one foot of saturated, the correlation of which has not been reported. The test was drilled to 4453 feet and a string of 8⅝-inch casing cemented at 4284 feet. It is thought to be one of the best bets that the Seminole district has had for several years so far as the possibility of finding something of major importance is concerned.

C. P. PARSONS, Halliburton Oil Well Cementing Company, Duncan, Oklahoma, recently spent several days in Houston on business.

Interesting Test Starts At Oklahoma City

Oklahoma City.—Sinclair Prairie Oil Company has assigned half interest in its Lucas lease to Travis Petroleum Company which started digging cellar and pits for Lucas 1, NW NE SW Section 36-12n-3w, on the northeast edge of the Oklahoma City pool. The lease comprises approximately 50 acres lying between the right-of-way of the Rock Island Railroad and the city limits in the southwest quarter of the section. The test will be of interest due to the fact that it is located on the east or downthrow side of the fault, within a short distance of Blackwell Oil & Gas Company's attempt to find Wilcox sand production several months ago. It is believed, however, that the test may pick up Wilcox sand which swings around the north end of the fault and is found productive on the east side of the fault under Empire Oil & Refining Company's Gustine lease in Section 1-11n-3w. Two small producers were found on this lease.

The fault which limits production on the eastern side of the pool is of special interest geologically since it has a throw of 1800 to 2000 feet on the south end of the pool and apparently dies out northwestward since the throw rapidly diminishes. Its termination has not been found due to lack of development in the southeastern portion of township 12n-3w. Just how important this area is may never be determined as it lies within the restricted zone part of which is occupied by the Oklahoma State Fair grounds.

Langston Discovery Offset Flows 173 Barrels

Guthrie, Okla.—J. C. Shaffer, Inc., et al's Moss 1, C SW SW SE Section 11-17n-1w, north offset to the discovery well in the Langston pool approximately nine miles northeast of here, flowed 173 barrels in 24 hours on a test during the week. Production is coming from Wilcox sand logged from 5104 to 5124 feet, the total depth. It is reported that operators will shoot the sand and may subsequently test lower Wilcox sand in which the discovery well found oil and water and was plugged back.

Prolific Flow Opens New Oklahoma Pool

Perry, Okla.—The Texas Company et al's Voss 1, C SW NE SE Section 28-22n-2w, in what is being called the Polo pool, approximately eight miles northwest of here, dispelled any question as to the probability of a new pool for Noble County when it made 1810 barrels of high gravity oil in 21 hours, a portion of which time drilling was in progress. The well was reopened at 12:45 p.m., July 18, after being shut in for about two weeks awaiting pipe line connections by Stanolind Pipe Line Company. During the first 13 hours and 24 minutes it flowed steadily but at the end of this time started heading, making a 10-minute head every hour. At 4:00 p.m., on July 19, it was deepened one foot with no increase. Operators then run the bailer and corrected total depth from 4873 to 4875 feet on a sand line measurement. During the first hour it made 275 barrels and then settled to about 115 barrels per hour.

Stanolind Oil & Gas Company et al have announced location for Voss 2, C NW NE SE Section 28-22n-2w, north offset to the discovery well, which is on a 240-acre block owned by The Texas Company and Darby Oil Company, each having 33 1/3 percent and Stanolind Oil & Gas Company with Amerada Petroleum Corporation the remaining 33 1/3 percent. It was announced during the week that Stanolind Oil & Gas Company will operate all wells on the block.

Oil Found in Old Gas Field

Chickasha, Okla.—Twelve years ago John B. Nicklos of Chickasha drilled in Farwell 1, SE NE Section 26-5n-8w, the discovery well in the Chickasha gas field and the first producing well in Grady County. Gas was found in what is now known as the Nichlos sand at 1350 feet from which the well made 48,000,000 cubic feet initially. During the past week Nichlos drilled in Farwell 2, C NE Section 26-5n-8w, topping a sand at 2932 feet and drilling to 2980 feet where the well made 160 barrels in 24 hours. The well was drilled by the same crew which 12 years before drilled the discovery well. Correlation of the sand is not available but it does not seem probable that it is Ramsey which has produced gas between 2000 and 2500 feet and a small amount of oil between 2450 and 2475 feet. Both the Ramsey and Nichlos sands have been prolific gas producers and at one time the Chickasha field was rated as the largest gas reserve in the United States.

Oklahoma City Area Wildcat to Be Abandon

Oklahoma City.—Gypsy Oil Company's Grant 1, C SE NW Section 27-13n-4w, approximately six miles northwest of Oklahoma City, had dry Simpson sand from 7470 to 7482 feet and was shut down awaiting orders to abandon. Although it has been known for some time that the test was running too low to make a producer it has been of geologic interest since it helps to further define the trend of Nemaha Granite ridge.

To Determine Oklahoma Demand on July 26

Oklahoma City.—The corporation commission has set for hearing on Thursday, July 26, C.D. No. 126, an application of W. J. Armstrong, state proration umpire, to ascertain and determine the reasonable market demand for oil from the state of Oklahoma and the common sources of supply therein, for the months of August and September, 1934. The corporation commission will hear only emergency cases during August when it would be difficult to render decisions due to vacations of the members. The last hearing now scheduled for July is on the application of M. T. Smith for adjusted allowable production from his Jones 1 well.

Second Edmond Pool Well a Big Gasser

Edmond, Okla.—Mid-Kansas Oil & Gas Company's Dahl 1, SEc Section 31-14n-3w, west offset to the discovery well in the Edmond pool four miles west of here, was one of the two most interesting tests in Oklahoma during the past week. Top of the Simpson formation was reported at 6290 feet with Wilcox sand from 6385 to 6393 feet, the total depth. The plug was drilled early in the week and a bridge found 60 feet off bottom. Operators filled the hole with water to drill the bridge out and, apparently as the bridge was broken through, gas blew the load from the hole snapping the drilling line and leaving tools in the hole. It is estimated good for 50,000,000 cubic feet of gas as it stands with tools in the hole and only eight feet of penetration. Geologists were puzzled as to just what to expect from the test when all upper markers ran high and top of the Wilcox sand was found 316 feet structurally higher than in the discovery well.

The discovery well was completed in 1930 by Mid-Kansas Oil & Gas Company et al at Messer 1, C SW SW SW Section 32-14n-3w, which has been shut in most of the time since its completion. During May of this year it yielded at a daily average rate of 466 barrels daily. Amerada Petroleum Corporation and Stanolind Oil & Gas Company were drilling below 6395 feet in Simpson formation after topping Viola limestone at 6335 feet and logging Simpson dense from 6357 to 6364 feet in Suneram 1, NEc Section 6-13n-3w, southwest diagonal offset to the discovery well. It is running lower than the Dahl test but considerably higher than the discovery well and is being accorded good chances for making a producer.

Oklahoma Completions Drop During Week

Tulsa.—Shortage of water due to continued excessive heat and lack of rainfall was blamed for the general lull in operations in Oklahoma when for the third successive week first reports in the state fell far below the number of completions. Oklahoma scouts reported 23 starts as compared to 37 oil wells with total initial production of 14,371 barrels, one abandoned location, one dry gas well with initial volume of 250,000 cubic feet and 17 dry holes, a total of 56 completions. Many drilling wells in all parts of the state were reported either shut down for water or seriously handicapped by the shortage. Completions of the week involved 128,875 feet of drilling which included 637 feet in four old wells drilled deeper.

Reports were as follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
CADDO COUNTY—		
J. B. Nichols, Regney 1, swc nw 12-5n-9w	*	4360
CARTER COUNTY—		
Wright-Smith, Moore 1, ne se ne 5-1s-3w	lcn.	abd.
Coline Oil Corp, Huggins "F" 10, se sw nw 8-2s-2w	22	2807
Schermerhorn, Mancum 17, se se nw se 3-4s-3w	20	1059
CREEK COUNTY—		
Midco Oil Co., Land 1B, se se nw 12-18n-11e	*	840
Spartan Inv., Lee 12, sw sw sw ne 12-18n-11e	*	1420
Halburt et al, George 4, cwl ne se 23-18n-11e	*	....
C. W. Titus, Casey B 1, ne ne ne sw 3-17n-8e (formerly reported No. 4)	296	1384
Bryan Petroleum, H. Wilson 2, cel ne ne 21-15n-8e	110	2870
Devonian Oil Co., Smith 1, nec nw 36-15n-7e	65	3762
HUGHES COUNTY—		
Elliott, Pickens 4, ce¼ se nw ne 15-7n-8e	300	1200
LINCOLN COUNTY—		
Amerada & Stanolind, James 1, nec sw 35-13n-5e	729	4309
Mid-Continent, Ellis 1, se se nw 35-13n-5e	100	4257
LOGAN COUNTY—		
Gypsy Oil Co., Good 1, csw nw 27-17n-4w (owdd)	2003	6306
MARSHALL COUNTY—		
Letz et al, Coatsworth 3, se nw nw nw 32-5s-6e	*	670
Centrop Oil Co., Burge 5, nw se ne se 25-7s-5e	23	533
R. A. Godfrey, Burge 4, sw nw se se 25-7s-5e	32	554
R. A. Godfrey, Cox 1, sw se se ne 26-7s-5e	6	366
MUSKOGEE COUNTY—		
Joe Hardy, Beams 1, nw nw ne nw 10-13n-16e	9	1830
OKLAHOMA COUNTY—		
Aboco Oil, Armour 1, se ne nw nw 2-11n-3w	*	2350
Carl Larkin & G. D. Warr et al, Carney 1, se sw sw nw 22-11n-3w	912	6535
Carl Larkin et al, Johnson 1, sw ne se 22-11n-3w	768	6488
I. T. I. O., Wisel 5, sec se 26-11n-3w	42	6597
OKMULGEE COUNTY—		
Hendricks, Harris 12, sw sw nw ne 1-14n-14e	10	1104
Wallace, Colbert 14, cwl nw nw 14-14n-14e	*	1818
Peterson, Ware 14, ce¼ sw sw 9-15n-14e	20	891
J. Summers, Roe 8, se nw nw 16-15n-14e	20	841
Carpenter, Tiger 1A, sw sw nw sw 27-17n-11e	*	2282
Vandeventer, Jefferson 6, nw ne se 33-16n-13e	¶¼	2024
OSAGE COUNTY—		
Superior Oil Co., 1, cn½ n12 se 5-22n-11e (owpb)	30	1860
E. G. Todd 7, ne sw sw 3-23n-8e	5	2193
F. A. Haver 8, cse sw 16-23n-11e	*	1832
Barnsdall Oil Co., 16, se ne sw se 18-23n-12e	30	1716
Lewis & Continental 4, sw sw se 9-24n-7e	622	2614
Kasishke 11, nw ne ne 16-24n-7e	90	2621
Carter Oil Co. 1, se se ne 9-25n-6e	2410	2720
Carter Oil Co. 7, nec ne 10-25n-6e	1686	2789
Phillips Petroleum 6, swc nw 15-25n-6e	188	2760
Kewanee Oil Co. 8, sw se sw 21-27n-6e (owdd)	*	3035
PONTOTOC COUNTY—		
Schermerhorn, Norris 1, nwc ne 19-2n-7e	*	2016
Delaney, Walker 1, csw se nw 22-5n-6e (owdd)	*	1710
POTTAWATOMIE COUNTY—		
F. Russell, Davis 1, sec se 25-6n-3e	*	3779
Superior Oil Co., Caudle 1, sw nw nw 24-7n-4e (owdd)	7	4322
Phillaine, Garrett 1, ne se nw 28-7n-4e	1232	4134
Sinclair Prairie, Deatherage 3, se ne nw 28-7n-4e	817	4154
Magnolia Petroleum, Martin 2, ne se nw 34-7n-4e	100	4012
Atlantic, Sinclair-Prairie, S. Foreman 3C, cwl ne nw 18-9n-5e	518	4120
Darby et al, Barrett 1, cnw se 19-9n-5e	154	4158
Manhattan Drilling Co., Littleton 1, swc nw 20-9n-5e	107	4223
SEMINOLE COUNTY—		
Fleetborn, Bowlegs 1, nec sw 27-8n-8e	864	4214
J. E. Campbell, Lorance 1, sec nw 20-9n-7e	¶8-*	4242
STEPHENS COUNTY—		
Mudge Oil Co., Emerson 8, ne se se se 22-1s-5w	9	695
TULSA COUNTY—		
Kuner Oil & Gas, Morrison 1, se se ne 34-18n-13e	*	2595
Green et al, Grayson 1A, ne ne nw 18-19n-14e	15	1322
WAGONER COUNTY—		
Whiterose, Porter 1, sw ne nw 14-17n-15e	*	1195
Boley, Smith 2, nwc sw 36-18n-15e.	*	983

*Failures; †Junked; ¶Million cu. ft. gas.

Kansas Has 21 New Oil Wells

Wichita, Kansas.—Kansas operators were being seriously handicapped by lack of water and continued drouth for any appreciable amount of time probably will bring about an almost complete shut down. This is especially true in the western portion of the state where a majority of the development is under way. Reports of the week included 16 first reports, 21 oil wells with total initial production of 8691 barrels, one dry gas well with initial volume of 500,000 cubic feet and 10 dry holes, a total of 32 completions which involved the drilling of 81,141 feet, including 1064 feet in five old wells drilled deeper.

Completions of the week are shown below:

Company, Well and Location	Init. Prod. Bbls.	Depth
BUTLER COUNTY—		
Flint Hills Oil Co., Martin 6, nw nw ne 27-28s-4e	¶½	1496
COWLEY COUNTY—		
D. Patton, Hall 1, nwc sw 29-31s-6e	345	2955
Deal Oil Co., Cobalt 1, ne se sw se 22-32s-4e (owdd)	20	3344
ELK COUNTY—		
Sherman, Barker 4, nw nw nw sw 10-31s-10e	40	2009
GREENWOOD COUNTY—		
Simmons, Disney 1, sw sw ne 35-22s-10e	*	2322
Wolf Creek Oil Co., Steckel 1, nw sw ne 12-25s-12e	*	1667
H. A. L. Oil Co., Wershing 8, nw nw nw nw 24-26s-9e	20	2155
HARVEY COUNTY—		
Skelly Oil Co., Smith 1, csw sw nw 17-22s-3w (owdd)	336	3495
Skelly Oil Co., Marten 1, se se se 19-22s-3w (owdd)	450	3462
Moorhead, Alton Twp. 1, cwl nw nw ne 20-22s-3w	930	3504
MARION COUNTY—		
Youker, Riffel 4, se nw sw 11-17s-4e (formerly Riffel 3)	*	2404
McPHERSON COUNTY—		
McPherson O. & G., Anderson 2, csw ne 31-18s-2w (owpb)	*	2980
Youker, Roseberg 1, nec nw 31-18s-2w	*	2332
Phillips Petroleum, Hindmarsh 3, ne nw sw 20-19s-1w	99	3426
Ozark Production, Blair 1, sec nw 32-19s-1w	31	2998
Kanoka, Griffin 5, ne nw sw 14-19s-2w	864	3374
McBride, Griffin 8, nw ne sw 14-19s-2w	693	3381
Shell Petroleum, Griffin 2B, sw sw ne 14-19s-2w	627	3368
Apex Oil Co., Knudson 4, cel w½ se 23-19s-2w	85	2960
Helmerich & Payne, Lovett 1A, swc nw 24-19s-2w	15	3414
Johnson, Benson 1, se sw se 12-19s-3w	*	2960
Argo Oil Co., Newfeldt 3B, se sw se 16-21s-3w	260	3077
RENO COUNTY—		
Sinclair Prairie, Base 2, cnw se 26-23s-4w (owdd)	698	3360
RICE COUNTY—		
Continental et al, Bennett 1, ne nw se 25-18s-8w	1249	3172
Magnolia Petroleum, Beyer 1, ne nw nw 21-19s-9w	*	3293
Atlantic Oil Co., Brandenstein 2, csw se 10-19s-10w	*	3337
Gypsy Oil Co., F. Malone 1, se ne ne 30-20s-9w	*	3358
RICE COUNTY—		
Garden, McCracken 1, ne ne ne 10-21s-7w	862	3361
RUSSELL COUNTY—		
Palmer, Borrell 1, ne ne se 21-13s-14w	692	3281
Central Petroleum Co., Dartland 1B, ne sw nw 4-14s-15w	250	3090
STAFFORD COUNTY—		
Stanolind Oil, Dinkle 1, sw nw sw 10-22s-12w	*	3880
SUMNER COUNTY—		
Continental Oil Co., Curry 3, cwl nw sw 26-34s-2e	125	3503

*Failures; †Junked; ¶Million cu. ft. gas.

Cleveland County Wildcat at 6900 Feet

Norman, Okla.—Phillips Petroleum Company et al were drilling below 6901 feet still in Hunton limestone topped at 6714 feet in Community-Baker 1 C SE NW Section 11-9n-2w, approximately five miles northeast of here and nine miles southeast of production in the Oklahoma City pool on the projected axis of that structure.

Several Kansas Wildcats Encounter Showings

Wichita, Kansas.—One of the most important showings of the week among Kansas wells that are nearing completion was from Barnsdall Oil Corporation's Sabin 2, C SW SW NE Section 11-23s-4w, in the Burrton area of northeastern Reno County. Hunton limestone was logged from 3552 to 3577 feet at which depth the test swabbed 20 barrels per hour swabbing to bottom. It was treated with 1000 gallons of acid and when reopened produced 1147 barrels in 24 hours. Production in the area was first obtained from the Chat, Kansas City-Lansing and Arbuckle, limestone horizons, the Hunton limestone production being a relatively recent discovery. Few wells in this horizon have been acidized in the state. However, that the formation responds readily to acid treatment, has been demonstrated previously on a large scale in the Seminole district of Oklahoma.

Sinclair-Prairie Oil Company's Shepherd 1, CSE SE NW Section 22-26s-9w, a wildcat test located near the town of Olcott on the Cunningham trend in southwestern Reno County, had a small showing of oil and water from Viola limestone at 4144 to 4242 feet. It topped Wilcox sand at 4243 feet and had a small showing of oil from 4248 to 4255 feet with a slight increase at 4255 to 4261 feet. Base of the sand was found at 4269 feet and a late report showed the test drilling ahead at 4280 feet in Simpson shale.

Holyrood Area

Slick Estate et al's Wilkens 1, CSW SW SW Section 18-17s-9w, southeast of Holyrood in southwestern Ellsworth County, topped Arbuckle (siliceous) limestone at 3265 feet and had 1500 feet of oil in the hole in two hours from pay at 3271 to 3276 feet, the total depth. Operators are preparing to pump. The same operators' Wilkens 1, CNE NE NE Section 24-17s-10w, southwest diagonal offset to the test shown above, found top of the limestone at 3255 feet and with the formation just scratched had four bailers of water per hour with no oil reported.

Russell County

J. H. Liggett et al's Chrisler 1, CSW SW Section 9-11s-15w, on the Gorham-Fairport trend in northwestern Russell County, topped the Oswald limestone at 3085 feet and was temporarily shut down at 3303 feet. In the Ochs area of southwestern Russell County Empire Oil and Refining Company made location for No. 1, CNW NW SW Section 24-15s-14w, and east offset to its Bender "B" 1, which was completed last month for 385 barrels from Arbuckle limestone at 3361 to 3369 feet.

Barton County

Atlantic Oil Producing Company's Straub 1, CSE NW Section 36-18s-11w, five miles east of Cheyenne Bottoms in eastern Barton County, topped Kansas City limestone at 2938 feet, set eight-inch casing at 2991 feet, and was drilling below 3009 feet with nothing showing.

Rice County

In the Beyer area of Rice County Keith et al's Grove 1, CSE SE NW Section 29-19s-9w, logged top of the Kansas City limestone at 2932 feet, had a show of oil and gas at 2953 feet and an increase from 2975 to 2985 feet. After treating the test with 1000 gallons of acid it was placed on the pump and yielded 215 barrels of oil and 20 barrels of water on a 24-hour potential gauge. In the area to the south of the Brandenstein pool, Mid-Kansas Oil and Gas Company's Proffitt 3, CNE NW NW Section 5-20s-9w, yielded 536 barrels of clean oil on a 24-hour potential gauge. Production is coming from pay in the Arbuckle limestone at 3219 to 3230 feet. Top of the formation was at 3200 feet.

Lario Oil & Gas Company made location for No. 3, C NE NE SW Section 7-20s-9w and Empire Oil & Refining Company staked location for No. 1, CSE NE SE Section 13-20s-10w, and No. 1, CNW SW Section 26-21s-13w. The same operator's Heckel 6, CSW NW SW Section 18-20s-9w, pumped 435 barrels in 24 hours from Arbuckle limestone at 3336 to 3342 feet.

Otis Gas Field

The Otis gas field in eastern Rusk County received a nice addition to its reserve when Schermerhorn Oil Company's Mauler 1, CNE Section 14-18s-16w, gauged 48,000,000 cubic feet from sand topped at 3485 feet and drilled to 3528 feet. With six-inch pipe set at 3495 feet operators logged pay from 3497 to 3517 feet, at which depth production was gauged at 36,700,000 cubic feet. An increase of 11,300,000 cubic feet was obtained from the last 11 feet of formation.

Sedgwick County

Sedgwick County received another set back during the week when D. R. Lauck's No. 1, CNE SE SW Section 6-28s-1w, yielded 3 barrels of oil and 30 barrels of water per hour after treating with 1000 gallons of acid. Top of the chat horizon was logged at 3335 feet and the test drilled to 3689 feet where water was encountered. It was plugged back to 3400 feet. Location is six miles west of the southwest corner of Wichita.

Kansas Allocation Meeting Date Is Set

Wichita.—The oil proration division of the Kansas State Corporation Commission has announced that on Tuesday, July 24, a public hearing will be held for the purpose of hearing the report of the Allocation Committee of the Planning and Coordination Committee, relative to minimum well allowables for the State of Kansas.

Cayuga Field Partly Defined; Also Extended

Palestine, Texas.—Productive limits of the Cayuga field were partially defined on the northwest flank of the structure when Tide Water Oil Company and Texas Seaboard Oil Company's Tucker Royall & Adam Cone 1, located on 197.13-acre lease, Thos. Bristow survey, failed to show oil or gas on drill stem test at 4091 feet, or 3772 feet below sea level. Salt water sand was encountered in deepening, but the owners have elected to drill through the Woodbine section, and late last week coring was underway below 4200 feet. This apparent failure was not anticipated, and is the first to be drilled on the discovery block, although two failures have been drilled by outside interests on the east flank of the discovery leasehold.

Bottom-hole water was registered by a second well on the above companies' block last week when N. N. Wills 1-B, Section 377.1-acre lease, M. H. Johns Survey, and midway between the north and south outpost producers, tested salt water at 4107 feet, and plugged back to 4074 feet, or 3758 feet below sea level. This well originally tested mostly gas at 4075 feet when completed via tubing on July 9, and was deepened to take in more of the oil sand. A minor extension to the southeast was accomplished when J. A. Campbell 1, Jas. Wilson survey, earned an estimated initial flow of 3000 barrels of oil daily, based on restricted gauge, from sand at 4035-4042 feet. It was bottomed in shale at 4047 feet, or 3770 feet below sea level.

Interest in the Cayuga area is now particularly centered on the outcome of two tests being drilled across the Trinity River in Freestone County and about two miles from production. American-Liberty Oil Company's Trinity Farms 1, center of 20-acre lease, G. B. Bonham Survey, is due to log first chalk markers early this week, while Trinity Farm Securities Company and Hunter & Rowe's Trinity Farms 1, R. M. Williamson Survey, has cemented surface pipe.

East Texas Woodbine Sand Play Gains Activity

Tyler, Texas. — Wildcat exploration work in the Woodbine sand belt of East Texas has experienced a big gain in activity in recent weeks, with new work extending over the entire district. Approximately one dozen projects have been launched since the first of the month. Faulted structures and uplifts located through geophysical surveys form the basis of these new operations, which are being conducted largely by independents through the aid of lease protection sales to other companies.

The Trinity sand horizon is the objective of a 6000-foot test now being rigged up on the west side of the Mexia field by Peyton Brothers, Mexia, and associates on the Steubenrauch land, located 870 feet from the southeast and 1170 feet from the northeast lines of the tract. Derrick was completed early last week, and heavy rotary rig is being set up by Summit Drilling Company, contractor. W. A. "Bill" Reiter, Mexia geologist, worked the geology, having also shared in the location of the discovery well of the Woodbine sand horizon drilled by the late Col. A. F. Humphreys at Mexia. The Trinity has excellent chances of yielding production at Mexia, as E. L. Smith Oil Company et al's Steubenrauch 1 developed a flow of 8,000,000 feet of gas with a spray of high gravity oil in May, 1927, at the 5738-foot level.

The west side of the Corsicana-Powell field is being given its first Trinity sand test through the drilling of Wheeleock-Collins et al's Cert 1, which is drilling below 4600 feet in Georgetown lime topped at 4305 feet.

Anderson and Cherokee Counties are the most popular Woodbine areas with the wildcatters. Both require tests to be drilled beyond the average Woodbine depth to reach the sand. Drilling has been started on a test in the Tennessee Colony area, western Anderson County, by Canadian Production Company's R. M. Jackson 1, located 1098.6 varas from the south and 450 varas from the east lines of 387-acre tract, Manuel Rionda Survey. Amerada Petroleum Corporation donated a portion of its 2100-acre block to the above concern for the drilling of the test. J. A. Johnson et al have rigged up to drill about seven miles southeast of Tennessee Colony on the M. B. Huffman 170-acre lease, R. S. Patton Survey. H. L. Hunt et al are starting a test about 2½ miles northeast of nearest production in the Long Lake field, Anderson County, on acreage contributed by the principal lease owners in the area. The location is 1120 feet from the southeast and southwest lines of the C. A. Miller-A. L. Temple 196.64-acre tract, Simon Sanchez Survey No. 2-10.

Leon County is receiving its first test in some months through the drilling of Killough & Tucker et al's G. B. Young 1, located in NWc of 100-acre lease, Jas. M. Boone Survey, and about four miles southwest of the Long Lake field.

Interest in Cherokee County is focused upon the recently discovered oil pool about seven miles southwest of Rusk by T. J. Wood et al, who have started their second test on fee land of New Birmingham Development Company. H. L. Hunt has made location for a test to be drilled about three quarters of a mile to the east, in the SWc of the T. R. Black 50-acre lease, D. W. McNabb Survey. Sun Oil

Typical operation at Cayuga in East Texas.

Company is scheduled to announce location shortly for a test to be drilled on its big checkerboard spread of lease protection to the northeast of the producer. Arch Rowan, Fort Worth operator and contractor, is also to start drilling shortly on a test in the Reklaw area, opposite the southwest corner of Rusk County.

Stewart & Egan, Tyler operators, have made location to explore a block centering on the Cherokee-Rusk County line and north of New Salem. The location is on the Hall Wood 847-acre tract, being 660 feet out of the northeast corner of Block 12, Jose I. Sanchez Survey, Rusk County.

Henderson County is promised a new test about four miles east of Malakoff through the staking of a location by Crosby & Pulp to be drilled in the easterly northwest corner of the M. T. Dodd tract, Geo. Aldrich Survey. Another location for the southeastern part of the county and north of Frankston is pending. Walter M. Burress, Palestine, and associates made location for the drilling of a test in Freestone County about 1½ miles north of Fairfield to test a structure located through surface and subsurface work. This location is in the northeast corner of the J. B. H. Orand north 50 acres of 95½-acre tract, W. M. C. Jones Survey.

A faulted structure in Franklin County outlined by geophysical surveys is being tested by Humble Oil & Refining Company, Ed. B. Hopkins, E. DeGolyer et al on the S. David-M. & P. Bank 200-acre tract, John Askey Survey. This test logged Pecan chalk at 1225-1325 feet, with an elevation of 365 feet, and was temporarily halted at 1510 feet to extend water lines.

L. G. Priest, Fort Worth operator, has moved in rotary to drill in eastern Hunt County after having recently completed J. R. Love 1, John Grilisky Survey, as a dry hole at 3666 feet in Grayson marl. The latter was originally drilled by J. H. Wagoner Oil & Gas Company to 3384 feet. Priest took the test over to explore the lower section of the Woodbine, encountering about 80 feet of virtually solid sand below the last red beds. It was reported that about two feet of this sand showed evidence of oil saturation, but apparently carried salt water. Previous tests drilled in this general fault trend were plugged after showing water in the upper section of the Woodbine, thereby failing to make decisive tests of the horizon. Priest's new test is to be drilled in the southwest part of the Barnett 212-acre tract, J. C. Hamer Survey A-417, located along a known fault between an old dry hole drilled to 3360 feet by Gulf Production Company's Cannon 1, and Chas. Pettit et al's 3140-foot failure on the Cooper land.

Completions in East Texas Field Total 82

Tyler, Texas.—The East Texas field accounted for 82 completions during the past week, representing a slight recovery from the slump sustained the previous week.

The Texas Railroad Commission is beginning to relax from its briefly applied ban against the authorization of permits to drill additional wells on leases having a high well density. Special hearings are being conducted as a formality on applications that are exceptions to the spacing rules put into effect May 29, but some operators are being remarkably successful, with few exceptions, in having requests approved.

Sun Oil Company helped to pin down the eastern limits of production in northern Gregg County in completing its W. L. Fuller 1-B, NWc 50-acre lease, M. Alexander Survey, after drilling to 3712 feet. H. Nelson et al's Negro Lodge 1, Southern Gregg County, developed a junked hole at 3597 feet, and rig has been skidded 60 feet to the west of the original location.

Detailed list of completions in the East Texas field during the past week follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
JOINER AREA—		
Atlantic Oil Prod. Co., J. E. Strickland 2-B	500	3668
J. E. Strickland 7-D (184-ac)	5500	3680
Combined Oil Interests, G. W. Eaton 20 (125-ac)	7800	3735
R. W. Fair & Thompson, Bradford 2 (10-ac)	1500	3638
F. W. Fischer et al, G. W. Wilson 3 (3-ac)	10,000	3770
W. H. Gant-Garvin-Wegner, J. N. Hale 2 (41-ac)	1200	3608
Humble Kangerga Bros. 44-A (330-ac)	8800	3670
J. H. Silvey 15-A (142.85-ac)	7500	3696
R. E. L. Silvey 41-A (240-ac)	7200	3734
R. E. L. Silvey 45-A (240-ac)	7200	3719
M. C. Thompson 10 (126½-ac)	10,000	3626
H. L. Hunt Prod. Co., W. P. Moore 11 (82.67-ac)	9400	3640
John Mabee Consolidated Corp., J. F. Maxwell 2-B (41-ac)	500	3651
J. W. McCulloch & Ed. Zilkey, B. Watson-Deaner 3 (20-ac)	6000	3768
Mid-Kansas, H. C. & G. W. Burton 21 (254.44-ac)	7400	3721
Miller Prod. Corp., Bradford 10 (34-ac)	750	3640
Overton Ref. Co., S. & M. Clay 7 (65-ac)	25	3645
Yandell Rogers et al, R. T. Neal-Magnolia 1 (31-ac)	450	3716
The Saco Corp., E. B. Alford 1-E (3-ac)	500	3635
Smith Co. O&G Co., S. S. Cook 5 (12.46-ac)	9000	3728
Lenora Sneed et al, Salem Church 3 (2-ac)	5500	3767
The Texas Co., Allen Kersh 18 (211-ac)	9000	3630
KILGORE AREA—		
Amerada Pet. Corp., C. Jenkins 4 (50-ac)	3600	3545
Atlantic Oil Prod. Co., L. P. Griffith 14 (85.66-ac)	9200	3604
Bay Oil Corp., A. Godley 4 (26½-ac)	6100	3575
Cal-Tex Corp., L. D. Crim 7 (50-ac)	9300	3581
Cloverleaf Pet. Co., Sam Carr 2-C	9000	3593
Gulf, H. C. Alexander 23 (209-ac)	5800	3562
F. Birdsong 12	7200	3598
W. Florence 14 (165.09-ac)	8400	3680
S. B. Hall 7 (50-ac)	6500	3664
Will Oten 3 (48-ac)	7800	3672
M. E. Peterson 11 (205-ac)	7200	3642
Humble, L. D. Crim 116 (906.98-ac)	5750	3670
David Ladd 7-A (38.85-ac)	5500	3697
S. S. Laird 55-B (568.53-ac)	7000	3632
Henry Sexton 22-B (258.6-ac)	5800	3752
Louisiana Oil Ref. Corp., N. Mayfield 5 (40-ac)	9000	3700
Magnolia Pet. Co., Laird-Crim 6 (54.51-ac)	10,400	3559
H. Nelson et al, Negro Lodge 1	†	3597
M. C. Scheble, Rec., Sabine River 6-R, Tr No. 6	7100	3551
Shell Pet. Corp., J. S. Elder 6-A (50-ac)	8000	3600
W. W. Elder 22 (196-ac)	8500	3625
Nellie Jobe 10 (60-ac)	9000	3590
J. B. Watson 39 (285.2-ac)	8500	3648
Snowden et al, J. Sparks 1	750	3520
Sultana Oil Corp., Sabine River 1-A, Tr No. 6 (41-ac)	500	3555
Sun Oil Co., J. R. Beall 16 (180-ac)	8000	3626
Tide Water Oil Co., F. L. Buntyn 5-C (16.91-ac)	10,400	3708
LONGVIEW AREA—		
Alco Royalty Corp., A. N. King 3 (24-ac)	11,000	3641
Amada Pet. Co., D. L. Magrill 7 (45-ac)	9000	3699
W. D. Ambrose et al, Geo. Jones 4-B	10,500	3607
Atlantic Oil Prod. Co., J. C. Judge 59 (455-ac)	10,000	3540
J. C. Judge 60 (455-ac)	10,500	3540
J. C. Judge 61 (455-ac)	10,300	3525
J. M. Moore 59 (434-ac)	7800	3543
Wirt Davis et al, Harrison 4 (15-ac)	10,500	3574
Eastern Texas Pet. Co., D. A. Fleet 10 (112-ac)	5400	3675
D. F. Smith 14 (611-ac)	1000	3584
D. F. Smith 15 (611-ac)	500	3585
Faith Oil Corp., J. C. Barrett 10 (140-ac)	5500	3682
Gen'l Crude Oil Co., F. T. Rembert 9 (89.27-ac)	7200	3527
Gulf, A. Neeley 8 (49.44-ac)	6000	3533
Humble, L. Christian 6 (59-ac)	8500	3677
W. C. Mackey 14 (198½-ac)	750	3616
May Mattox 6 (62.4-ac)	3000	3689
I. D. Smith 23 (245.98-ac)	8200	3641
Humble-J. K. Wadley-E. P. Evans, E. W. Clements 10 (50-ac)	9400	3566
T. D. Humphrey et al, L. M. Baker-Johnson 1 (40-ac)	30	3664
W. W. Lechner & G. E. Hubbard & & Co., W. M. Harley 4-A (18-ac)	8600	3580
A. D. Morton et al, T. Hensley 2 (6-ac)	8000	3565
O. J. Perren & A. L. Fell, W. M. Landers-Shell 4	7500	3722
Selby O&G Co.-Lewis Prod. Co., Snavely 9 (118.3-ac)	8600	3598
Snavely 8-D (105-ac)	9000	3593
Sells Pet., Inc., R. Fisher 4 (63-ac)	9100	3669
Simms Oil Co.-Stanolind, Flewellen 26-B (374-ac)	7500	3703
E. L. Smith Oil Co., E. A. Watts 5 (100-ac)	7200	3619
Sun Oil Co., W. L. Fuller 1-B (50-ac)	*	3712
Tide Water Oil Co., Lake Devernia 29 (270-ac)	10,000	3531
Twin Oil Co., M. Bonner 12 (148-ac)	6000	3660
J. A. Woods & Salome-Cooper Drl. Co., Sheppard 7 (57-ac)	11,000	3587
Sheppard 8 (57-ac)	10,500	3689
ANDERSON COUNTY (Cayuga Field)—		
Tide Water-Texas Seaboard, J. A. Campbell 1 (243.15-ac)	3000	4047
J. N. Edens 3 (988.6-ac)	3500	4089
J. N. Edens 4 (988.6-ac)	4500	4065
VAN ZANDT COUNTY (Van Field)—		
Pure Oil Co., A. G. Maxfield 5 (107.8-ac)	*	3030

*Failures; †Junked; ¶Million cu. ft. gas.

Wildcat Attracts Interest to Andrews

San Angelo, Texas.—Humble Oil & Refining Company's wildcat R. M. Means 1, northeastern Andrews County, cored porous lime at 4125-4143 feet that gave promise of yielding oil production. Another core taken in deepening to 4152 feet showed excellent oil saturation. Drill stem test had not been completed late Friday.

This wildcat is located in NEc Section 2, Block A-35, P. S. L. survey, and near the center of a large block of acreage held under lease by the company. Supported to have donated seven one-quarter sub-surface geological report, this test has been watched with interest since it developed a flow of 10,800,000 cubic feet of gas, testing 1675 pounds rock pressure, at 2957 feet last May 2. Considerable difficulty was experienced in mudding off this production, and further delay was encountered with the running of 6⅝-inch casing at 4000 feet. It logged first brown lime at 3845 feet, with an elevation of 3167 feet.

Andrews County is growing in popularity as a wildcat center, having two new tests in prospect, while drilling is under way on another. Crump & Hanagan et al have assembled a block in the northwest corner of the county, with tentative location for a lime test at C SE Section 4, Block A-37, P. S. L. survey. Amerada Petroleum Corporation is reported to have donated seven one-quarter section tracts out of its nearby block, while Humble Oil & Refining Company is reported to have contributed $7500 cash as dry hole money by reason of having considerable lease protection in the immediate area that will be tested. C. E. Hyde et al have contracted to drill a 5000-foot test about eight miles southeast of Andrews, having made location in NW¼ Section 29, Block 3, P. S. L. survey. Humble is credited with having paid $15 per acre for a 960-acre spread out of the block. Honolulu Oil Company and Llano Oil Company sold a similar sized spread out of their block to the latter company at $15 per acre, serving as protection acreage against J. E. Parker 1, near C SW¼, Section 7, Block A-44, P. S. L. survey, which is drilling below 1300 feet.

More than one half mile of additional acreage was proven for production on the south end of the North Cowden field, Ector County, last week when Landreth Production Corporation's T. P. Land Trust 1-B, NEc N½ S½ Section 3, Block 43, T-1-S, began flowing 75 barrels of oil and 4,000,000 cubic feet of gas daily at 4130 feet. It is to be deepened to about 4250 feet, then shot for a completion test. This outpost logged top of lime at 3957 feet, with an elevation of 3085 feet. Sun Oil Company has authorized an east offset, while Continental Oil Company and Empire Gas & Fuel Company will likewise have offsets to drill.

A rapid slump in oil yield was sustained by the northwestern Ector County wildcat producer of C. J. Davidson and Atlantic Oil Producing Company on the H. E. Cummins 160-acre tract, NWc Section 10, Block 45, T-1-N, when given first gauge last week. This well was credited with having produced 62 barrels of oil and 10,000,000 cubic feet of gas on the first day, and dropped to 28 barrels oil the next day. This discovery well was shot with 360 quarts of nitro on July 10 at 4509 feet, but was delayed in testing while awaiting arrival of tanks and separator.

Allocation Hearing for Van Postponed Again

Austin, Texas.—Hearing on the Van field, which was scheduled for July 19, has been postponed indefinitely by the Texas Railroad Commission upon application of the operators.

The purpose of this hearing, which was originally set for July 12, was to revise the method of allocation of production in the field.

Necessity for this action resulted from a suit filed in Federal Court by J. D. Wrather, who has one well in the field. He contended that since allowables for the various wells were calculated on the basis of acreage and no consideration was given to potential, that the order was invalid.

Federal Judge Randolph Bryant declined to enjoin the commission's order until a hearing had been held and some opportunity given to adjust the order on a different basis.

The commission sought to institute a series of open-flow potential tests in the field to determine the potential of each well individually, but this plan met with opposition from the operators other than Wrather.

When the hearing was first postponed from July 12, Wrather was given an allowance of 250 barrels per day for his well, pending the outcome. This allocation is to be continued until such time as the commission determines the course of action that should be followed.

Postpone Upshur County Separation Hearing

Austin, Texas.—A hearing before the Texas Petroleum Company for the des- July 17, on the application of Eastern Texas Petorleum Company for the designation of a portion of Upshur County as a separate field from the remainder of East Texas has been indefinitely postponed at the request of the applicant.

Twenty-Five Mile Pipe Line for North Texas

Wichita Falls, Texas.—The Texas Pipe Line Company has completed a survey for the construction of a 25-mile six-inch crude line to extend north from the two prolific high gravity oil producers on the Johnson tract, Navarro Structure, located in western Foard County, to a point near Acme, Hardeman County, where connection will be made with the company's Texas Panhandle-Electra eight-inch trunk line.

The Texas Company and Sun Oil Company own the two producers on the Navarro Structure, and the new line will replace a temporary connection given the property last October by Gulf Pipe Line Company. The two wells are prorated to a maximum of 750 barrels daily, although they are the largest in North Texas and also the most isolated in respect to other production. The oil tests 47 gravity. Drilling is under way for another test situated on a line between the producers, which are rated at above 3000 barrels daily each from the Canyon lime horizon near the 3600-foot level.

A small pump station has been ordered erected in the field, while two 55,000-barrel steel tanks will also be installed in order that the crude may be moved to the Coast in batches, thereby avoiding contamination with sulphur crude originating in the Panhandle.

To Test and Cement Deep West Texas Well

San Angelo, Texas.—Bottom-hole temperature readings were slated to be taken late last week in the Gulf Production Company's J. T. McElroy 103, Upton County, and plans are also to survey the 6613 feet of uncased hole with an electrical device. The latter instrument is capable of ascertaining the presence of oil, gas or water porosity in formations passed up without testing before encountering a probable producing horizon at 10,564-10,630 feet two weeks ago. This well is the second deepest drilled hole outside of California, and holds the depth record for Texas. It is to be cased with 7⅝-inch O.D. 34-pound, Grade D, pipe, near the 10,300-foot level when the above preliminary examinations are completed, then a swabbing test of the saturated lime in the lower section of the hole will be attempted. This will constitute a record string of casing for this size.

A nationally known oil well cementing company has been engaged to cement the pipe, which will probably establish a record for that size at such a depth. Accurate knowledge of the

temperature existing near the bottom of the hole is deemed necessary to arrive at the proper mixture of cement and chemicals to be used.

Oil stained limestone cores recovered from the Pennsylvanian will be subjected to the electrical formation testing device to be run before the open hole is cased off. This device will also be used for the purpose of locating any water bearing formations that may have been passed up while drilling and coring with rotary equipment. The main object of this survey is to improve the log record, which unquestionably is the most complete progress report ever compiled on a test of its depth class.

A positive call has not been made by Gulf Production Company's geologists and paleontologists as to the identification of the horizon yielding the oil and gas saturated lime. However, it is generally believed to be in the Ordovician limestone, which has been tentatively called at 10,167 feet, with an elevation of 2625 feet. Exceedingly hard gray lime and chert was logged from 10,167 to 10,564 feet.

West Central Texas New Wells Average Small

Ranger, Texas.—Nineteen completions were credited to the West Central Texas district last week. There were seven oil producers and two dry gassers completed during this period for an aggregate initial yield of 383 barrels of oil and 8,500,000 cubic feet of gas daily. The remainder of the completions consisted of one junked hole and nine failures.

Detailed list of completions in West Central Texas for the past week follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
BROWN COUNTY—		
Humble, Kilgore 5-A	15	1215
Petroleum Oil Interests, Inc., R. A. Thompson 2	*	1345
CALLAHAN COUNTY—		
Ray Fields et al, M. Alexander 1	*	1218
Cleve Galloway et al, J. Heyser 1.	*	550
COLEMAN COUNTY—		
H. D. Mayfield et al, M. F. Rude 1, sec 246	*	986
J. C. & M. L. Shaffer, Geo. W. Garrett 9	¶1½	2285
Taylor-Link Oil Co., Stewartson 4.	30	1723
PALO PINTO COUNTY—		
Palo Pinto O&G Co., Shrawn 11	¶7	3000
SHACKELFORD COUNTY—		
Charter Oil Co., Morris-Buie 2	8	1410
Engle & Kiser, J. B. Mathews 1	*	1150
Gilman-McMurry-Westexas Roy. Corp., Morris-Buie 1	15	1621
J. P. Harris et al, Mathews 2-B, sec 57	30	808
James & Klinger, J. W. George 1, sec 1	*	800
King Royalty Corp., R. A. Elliott 1, sec 48	*	2129
T. K. Simmons et al, B. C. Harvey 7, sec 6	260	1726
W. F. Snebold et al, T. W. Lee 1	25	896
Texas Consolidated Oil Co., W. D. Reynolds 7-B	*	1255
STEPHENS COUNTY—		
Mid-Tex Oil Co., Morrison 4	†	603
Rhodes-Higher & Christie, Walker 7	*	3960

*Failures; †Junked; ¶Million cu. ft. gas.

North Texas Completions Continue to Run High

Wichita Falls, Texas.—North Texas accounted for a total of 62 completions during the past week, in spite of the widespread curtailment of drilling in Archer County and other popular drilling centers because of a prolonged shortage of water for rotary rigs. A pickup in development work in areas not greatly handicapped by the drouth made it possible for district to approach the high mark for the year on weekly quota of completions, with increased activity particularly noticeable in Wichita and Wilbarger Counties. During the past week an aggregate of 7133 barrels of new production was added through the completion of 34 pumping and flowing wells, and the remaining 28 completions were dry holes.

Rather than to remain idle while awaiting the replenishment of streams and water tanks, many operators are proceeding with their drilling operations by hauling water in tank trucks.

The Strawn sandy-lime horizon is to be tested in the south central part of Archer County and due north of Anarene by W. B. Hamilton et al's Giddings 2, located 1715 feet from the north and 1600 feet from the west lines of the A. McMillan Survey A-275. This deep test is changing to cable tools after cementing seven-inch pipe at 4741 feet, having made the latter depth within two months. In the old Geraldine townsite area, McCarty Oil Company's L. F. Wilson 1-B, Section 332, failed to produce in the Canyon lime and has been ordered abandoned at 2501 feet.

Somewhat of a record for utilization of acid solution for completing an oil producer in the Horal-James field, Young County, was attained by Christie Brothers et al's G. W. McComas-Gulf 1, SWc Section 444, T.E.&L. Co. Survey, in making a flowing producer at 4013 feet. It was treated with 3300 gallons of solution in gray lime at 3819-3945 feet, then deepened to 4006 feet and given a second injection of 6000 gallons of chemicals. The well was then shot with 225 quarts of nitro on June 28, resulting in a steady flow of 15 barrels of oil per hour, plus small percentage of water.

Completions in North Texas during the past week follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
ARCHER COUNTY—		
Bridwell Oil Co., Falls 9, blk 20	500	1121
L. T. Burns et al, Perkins-Farmer 8, sec 10	200	1611
L. F. Wilson 13-R, sec 108	60	1457
Shirley L. Clum et al, J. D. Lassiter 1	*	1227
Barney Cockburn, R. J. Andrews 2, sec 2437	200	1408
J. N. Crofton et al, D. L. Bishop 1, blk 52	35	1424
Fain-McGaha Oil Corp., F. C. Green 9	275	1188
F. C. Green 13	600	1165
Fain-McGaha-Humble, Logan 37	275	1160
Logan 38	250	1157
Logan 39	300	1165
Frasier & King, Archer Co. 1	*	927
W. B. Hamilton, Ward 3, sec 1384.	*	1058
Huggins Oil Co., J. R. Parkey 1-B, sec 1	*	1706
Justice Oil Co., Wm. Justice 4, blk 6	40	1076
McCarty Oil Co., L. F. Wilson 1-B, blk 332	*	2501
N. H. Martin & Son, C. R. Seals 1, blk 143	*	1428
Maxson & Panhandle Ref. Co., F. C. Green 26-B	350	1098
W. B. Omohundro et al, Perkins-Farmer 1, blk 56	*	1485
Panhandle Ref. Co., J. L. Anderson 10, blk 18	210	1404
Peckham & Medders, Wm. Justice 3	400	1103
Perkins-Cullum Oil Co., Falls-Tiktin 23, blk 12	200	1166
Pois-Shultz-Weaver, F. C. Green 27	500	1158
Staniforth & Ray, J. T. Richardson 2, blk 17	175	1412
T. B. Wilson 12	175	1610
The Texas Co., B. C. Rhome, Jr., 1, blk 24	8	1158
United Producers Co., Harmonson 1.	10	983
BAYLOR COUNTY—		
S. V. White et al, W. H. Portwood 2, sec 1281	185	1407
W. H. Portwood 3, sec 1281	*	1412
CLAY COUNTY—		
Bridwell Oil Co., Saner 3	*	1369
Regal Oil Co., Saner 4	*	1120
The Texas Co., W. F. George 2, blk 4	60	1133
JACK COUNTY—		
Brazos River Gas Co., Clayton 6	65	2940
W. J. Grisham et al, T. E. Craig 1, blk 1	*	397
Lenin & Anagos, L. Carter 1, blk 7.	*	503
J. Whitener et al, L. M. Craig 2, blk 3	*	322
MONTAGUE COUNTY—		
O. V. Beck et al, Davenport 4	700	1710
THROCKMORTON COUNTY—		
Dickey Bros. et al, Saunders 2	*	757
WICHITA COUNTY—		
H. I. Covert et al, A. Maye 1, sec 1	*	826
Empire Holding Co., Foster-Allen 1.	*	2002
Golding & Cochran, Waggoner Bros. 12-A, blk 23	20	1391
Stanley Thompson et al, Mrs. H. S. Griffin 1	*	1850
United Producers Co., Kemp-Blair 5, sec 44	*	1812
WILBARGER COUNTY—		
Consolidated Oil Co., W. T. Waggoner 1-W, sec 35	*	1901
W. T. Waggoner 1-X	300	1909
R. H. Cook Oil Co., A. Streit 1, sec 29	*	1200
L. W. Fritz et al, W. T. Waggoner 1, sec 47	*	1963
Golding & Cochran, Waggoner 1-Q, sec 39	*	1990
W. B. Hamilton et al, Waggoner 6-L, sec 49	10	1293
Hegralle Oil Co. (was J. B. H. Henderson), Waggoner 2-A, sec 35	300	1894
Waggoner 3-A, sec 35	250	1878
Waggoner 4-A, sec 35	100	1883
S. J. Lynch et al, J. Jokel 1, sec 111	*	2225
Merry Bros. & Perini, Waggoner 1, sec 34	*	1956
Pigg & Daniels, Waggoner 1, sec 36	50	2583
YOUNG COUNTY—		
Christie Bros. et al, G. W. McComas-Gulf 1, sec 444	350	4013
R. C. Crabb et al, W. T. Hightower 1, sec 190	*	1302
Hunt & Thomas, R. Myers 3, sec 160	*	1067
Kleiner-Hill & West, C. W. Langston 54-B, sec 1490	10	602
Nash-Windfohr-Bob Thompson & A. C. Bierman, Graham-Vick 12	170	2585
Petroleum Producers Co., T. Hunt 1, sec 160	*	1070
Wo-Mac Oil Co., Prideaux 1	*	787

*Failures; †Junked; ¶Million cu. ft. gas.

Seven New Wells Added in West Texas

San Angelo, Texas.—Seven completions were scored in West Texas during the past week. There were five producers with an aggregate of 1480 barrels of oil and 22,000,000 cubic feet of gas production on initial gauges. A failure and a junked hole were completed in Jones and Taylor Counties, respectively.

Company, Well and Location	Init. Prod. Bbls.	Depth
ECTOR COUNTY—		
C. J. Davidson-Atlantic O.P. Co., H. E. Cummins 1	¶10-60	4509
Gulf Prod. Co., W. E. Connell 4-B..	135	3700
HOWARD COUNTY—		
Plymouth Oil Co., Kloh 10	1200	2543
JONES COUNTY—		
Elmer Close & Wallace, A. B. Foulks 1	*	1970
PECOS COUNTY—		
Mac T. Anderson et al, T. N. McKenzie 1	15	1378
TAYLOR COUNTY—		
Nelson E. Davenport, R. H. Anderson 1	†	2003
WINKLER COUNTY (Scarborough field)—		
Sid Richardson et al, Scarborough-Shell-Llano 1,	¶12-70	3335

*Failures; †Junked; ¶Million cu. ft. gas.

Panhandle Completions Reach High for Year

Pampa, Texas.—Completion of 16 oil and gas producers in the Texas Panhandle last week represented the largest weekly quota of wells reported this year. Gray and Wheeler counties are the heaviest contributors of new production, although a substantial gain in development work has been noted in recent months in Hutchinson, Carson and Moore counties. Two dry gassers, having a combined initial flow of 40,250,000 cubic feet of gas daily, were included among the completions last week, while an aggregate of 6595 barrels of new production was registered by 14 flowing and pumping oil wells.

Western Wheeler County stands out as the most productive area in the district, and is rapidly cutting in on the allowable production of other counties because of high potentials registered by many of the recent completions. Ohio Fuel Supply Company, Oklahoma City, scored the largest producer last week in completing its T. J. D'Spain 1, SWc SE Section 52, Block 24, H. & G. N. Ry. survey, flowing 1900 barrels natural on preliminary gauge from granite wash formation at 2483-2532 feet. It is an east offset to Christie-Hickman Drilling Company's D'Spain 2, which recently set a potential record for the county by gauging 3785 barrels natural at 2477 feet.

The Texas Company came in for a share of the flush production in Western Wheeler County by completing its P. M. Keller 1, NWc NW¼ Section 48, with an initial flow of 1550 barrels daily at 2508-2530 feet. Shell Petroleum Corporation's W. B. Bush 1, NEc N½NE Section 48, lacked sufficient gas to flow the high column of oil originating from granite wash at 2405-26 feet and 2490-93 feet, but pumped 236 barrels oil on first six-hour gauge. Champlin Refining Company, Enid, Okla., brought in G. W. Williams 1, NWc W½NE¼ Section 49, and a southeast diagonal offset to the biggest well, rated at 122 barrels oil per hour on preliminary gauge from broken formation at a total depth of 2500 feet.

Christie-Hickman Drilling Company, Wichita Falls, encountered salt water at 2478-81 feet in drilling D'Spain 1, NEc E½SW Section 52, but plugged back to 2458 feet successfully to complete in granite wash formation at 2440-58 feet for a preliminary output of 80 barrels of oil per hour on swabbing test. Rawlings et al's A. Plummer 1, NWc N½NE Section 45, and about one-half mile from nearest production, was rated good for 150 barrels daily while testing granite wash formation at 2443-2484 feet.

Company, Well and Location	Init. Prod. Bbls.	Depth
GRAY COUNTY—		
Continental, Combs-Worley 1-A	240	3078
Danciger O&R Co., Combs-Worley 1	15	3030
Empire, L. H. Webb 1-B	¶17¼	2738
Hoffman Oil Co., B. E. Finley 4..	475	3008
Magnolia, W. C. Heaston 3	255	3259
Saulsbury Oil Co., J. M. Carpenter-Becker 2	10	2755
Skelly Oil Co., J. F. Vicars 14	205	3292
Texas Co., Cook-Faulkner 12	390	3003
L. H. Webb 2	120	2640
Paul A. Tharp & Dawson, J. A. Hood 1	105	3032
WHEELER COUNTY—		
Dumar O&G Co., E. F. Bell 1	¶23	2015
Mid-Kansas, M. Huselby 3	380	2475
Ohio Fuel Supply Co., T. J. D'Spain 1	1900	2532
Shell, W. B. Bush 1	750	2493
Texas Co., P. M. Keller 1	1550	2530
HUTCHINSON COUNTY—		
Gulf, Panhandle Ref. Co., Dial 48..	200	3053

*Failures; †Junked; ¶Million cu. ft. gas.

Second Well at West Tuleta Looks Good

San Antonio, Texas.—Dirks Brothers et al's Mrs. William Rapp 1, 3700 feet northeast of the discovery well of the West Tuleta field of Bee County, is a much better producer than the first test, although it will not flow steadily. It is having flow valves installed to overcome this difficulty.

The well has the sand at 3899-3902 feet. It started off at the rate of six barrels an hour, but went dead several times. It flowed 85 barrels during one two-hour period. This is quite a contrast from the Skinner-Harris discovery well which is making gas with a slight bit of oil.

The Rapp is in Block 5, C. W. Hall subdivision, Uranga Grant.

Circle W. Oil Company, Dirks Brothers and Edwin M. Jones are expected to commence wells immediately.

Greta and Fox Fields May Be Linked

San Antonio, Texas.—Varied results in the deeper sands of the Greta-Fox trend, Refugio County, indicate that the two areas ultimately will be linked by a series of spotted producing lenses. Thus far, wells drilled on the east flank of the Greta field and the Fox field are virtual wildcats. A direct offset to a producer may miss one sand, but will pick up another shallower or deeper, not to be found in the offset location.

United Production Company's W. J. Fox et al 15, Hews and Brown survey, southwest of the Greta deep production (5900 feet) is completing at 5831 feet and gives promise of making some sort of producer. However, just east of the Greta deep producers and in virtual producing territory, Nesral and Baymore have shut down their V. E. Heard 1 (2), Ximines survey, at 6100 feet and likely will abandon at that level. Humble Oil & Refining Company's Fannie Heard 4, Ximines survey, is coring sandy shale at 5934 feet, apparently low. This may be accounted for by the fact that the hole has been whipstocked and the extra depth is made up in a crooked hole.

The Fox field offered a similar situation when being developed, numerous sands being found in limited sized lenses.

In the 4400-foot area, Atlantic Oil Producing Company and Stanolind Oil & Gas Company is completing J. M. O'Brien 4-G; Floboots Oil Corporation's J. M. O'Brien 3-F, drilling near 4000 feet; Hewitt and Daugherty's Mrs. M. F. Lambert 23, is drilling at 3350 feet, and Lambert 8 is spudding; Humble Oil & Refining Company is moving on Fannie Heard 6, has made location for J. F. B. Heard 9, and has set surface casing at 1191 feet in J. F. B. Heard 8. United Production Company is completing M. F. Lambert 8 and 9 in the 4400-foot horizon.

In the new Tomoconnor pool, recently opened by the Quintana Petroleum Company's O'Connor 1, four miles southeast of Greta, a second well is being started. Quintana's O'Conner 2 is 1400 feet from the southeast line and 466 feet from the northeast line of block 4, Swisher survey, northwest of the discovery. It is rigging up.

At Bonnie View, the outcome will be known shortly on the only promising test drilled on the prospect. Holland Oil Company's Peck 1, has run casing to 5320 feet, total depth 5351 feet, and is waiting on cement. It showed for a gasser in a sand at 5330-51 feet. There was some high gravity oil present in the test, indicating that it may make a gasser spraying distillate.

Vanderbilt Importance To Be Known Soon

San Antonio, Texas.—Phillips Petroleum Company is drilling at 5460 feet in sidetracked hole in Simon and Seidel 1, in the new Vanderbilt field, Jackson County. Its Drummond 1, 4200 feet west of the discovery well, is down 4730 feet. Both should be on the sand within the next few days. The company has been awarded a permit for its townsite well and will commence that operation during the next several days.

Turman Oil Company is rigging up on its Miller 1, the first operation to be started by any other company than the Phillips.

Sinton and Angelita Tests Due for Completion

San Antonio, Texas.—Outpost wells in the new Sinton and Angelita areas of San Patricio County, are on the sand or closely approaching it. The outcome of these tests will have a rather important bearing on the future of both new districts, which have one producer apiece—the discovery wells.

Atkins and O'Neil and Continental Oil Company's E. Welder 1-A, east corner block 2, Villareal survey, west and a little south of the discovery, missed the regular sand, but picked up another at 5441-47 feet, and made a drill stem test at 5435-47 feet. The tester slipped each time, but with the tool open only 30 seconds, five fourbles of oily mud was recovered. It is being tested again. Elevations are seven feet ground and 17 feet derrick floor.

Same operators' E. Welder 2, one location southeast of the discovery well, encountered a sand at 5251-60 feet, found in the discovery well, but not tested. A drill stem test failed and the well was carried to 5377 feet, topping sandy shale at 5368 feet. It is reaming for a test. Elevations are nine feet ground and 19 feet derrick floor.

Circle W. Oil Company's Welder 1, 1500 feet northwest of the discovery, has been plugged and abandoned by order of the Texas Railroad Commission. It was completed in the reglar sand, but made too much water and was carried deeper to 6017 feet. It plugged back, whipstocked out, redrilled the sand at 5357-73 feet, completing again as a producer. Water, gas and oil was the result. It exceeded the gas-oil ratio as well as made water and was plugged. The elevations are 18 feet and 28 feet respectively.

At Sinton, Plymouth Oil Company's Welder 2-A, 1320 feet east of the discovery, drilled to 5548 feet, plugged back to 5300 feet and in attempting to sidetrack, stuck drill stem and is now trying to loosen. It showed a little more oil than the discovery well, and is about 12 feet lower structurally.

Plymouth Oil Company's Welder 1-B, 3500 feet northwest of the discovery, is coring for the sand at 5430 feet.

Petrol Corporation and Heep Oil Corporation, drilling on Welder land, farther north, have not reached interesting depths. Heep has been granted permit for the well to be drilled just north of the Sinton townsite and is making location east of the producer for a well to be drilled on a 300-acre tract acquired last week.

Cedar Creek Field Extension Anticipated

San Antonio, Texas.—Joe Mills' Lytton 1, one half mile north of the Cedar Creek field, Bastrop County, showed excellent saturation in soft serpentine at 1627-29 feet, set casing and is now drilling in. It looks like one of the best producers in the immediate district and opens the way to an enlarged producing area. The well is 1040 feet from the southeast line and 1005 feet from the southwest line of the tract in the Navarro survey.

Jacob Field Is Extended to South

San Antonio, Texas.—The old Calliham field and the Jacob field may yet be linked by a series of producers being completed on a line between the two areas. If this is done, it will make a shallow producing area comprising approximately 3000 acres.

The field was extended 3501 feet south by the completion of Stewart, Smith and Storey's Jacob 1, John Fadden survey, which is flowing at the rate of approximately 75 barrels a day from 864 feet in the Jacob sand (Mirando). Several more locations have been made on a line south of this well in direction of the Calliham field.

In the extreme north end of the Calliham field and just north of the river, C. A. Hall et al's H. L. Lark 3, Scrugham survey, is flowing about 10 barrels a day from the Jacob sand at 1051-54 feet and is expected to make about 25 barrels when put on pump. This well has had considerable difficulty in completing. Split casing, heaving sands and caving shale, etc., hindered work, which possibly affected the size of the producer.

There are a number of development deals pending in the field for tracts ranging from 40 to 100 acres, which indicate an even heavier development campaign than has been conducted in the past few months.

Showing in Edwards Lime Near Luling

San Antonio, Texas.—Wagener, Daniels and Stierson's S. M. Blackwell 1, northwest of the Luling field in Caldwell County and in the Burdett Wells district, took a saturated core of the Edwards lime at 2344 feet and is reaming for a drill stem test. It topped the Edwards at 2340 feet, where it showed considerable gas. Going deeper into the horizon, the amount of oil increased.

This well is 4584 feet from the southwest line and 1667 feet from the southeast line of the John Roe survey.

The well is on the upthrow side of a fault with about 85-foot displacement. Just behind this fault are two major faults, their displacements ranging as high as 450 feet.

About two miles northeast of this well, S. S. Cargill is trying to complete W. Damerau 2, D. Cooper survey, on the upthrow side of the same fault. This well topped the Edwards lime at 2275 feet and went in two feet (depths corrected). Casing is set at 2210 feet. Elevation is 427 feet. There is considerable junk in the hole, in addition to cavings due to the open hole. This is being cleaned out and the well will be cored a little deeper.

Over in Guadalupe County, near Kingsbury, Holifield et al's G. W. Bailey 1, King survey, bailed a little brackish sulphur water from a total depth of 2193 feet, three feet in the Edwards lime. The cores of this section looked more like a portion of the dobie at the contact of the lime, hence the sulphur water in small quantities does not completely condemn the well.

Coletto Field Has Important Developments

San Antonio, Texas.—With the 2800-foot sand finally proved productive and a new horizon at 2200 feet also promising production, Coletto Creek field of Victoria County comes into the limelight as a rather active district. Its acreage is sufficiently cut up that a rather heavy drilling and prospecting campaign is to be expected.

Nutex Oil Company's Zimmer 1, southwest corner of the east half of the Zimmer 120-acre tract, R. Manchola grant, showed 300 feet of oil, 225 pounds pressure through ¼-inch chokes, top and bottom on a 12-minute drill stem test from 2204-9 feet. It is now drilling in after setting casing. The well previously showed gas in sands at 2156-60 feet and 2170-92 feet.

American Liberty Oil Company has made a location on the Gaugler tract, and has started a well on the Prybil tract. Feltex Oil Company has spud-

ded in H. Dietzel 1. Albert Plummer has moved in rig to work over A. Terrell 1, discovery well, at a total depth of 4437 feet. Petrol Corporation is expected to make at least one new location shortly.

South Texas Completions Include Important Failures

San Antonio, Texas.—A number of important wildcats in key locations of South Texas were abandoned during the past week as failures. To offset them, however, was the opening of new producing horizons and extensions to a couple of fields by wells in process of completion.

Initial production of 14 oil wells was 3233 barrels. The completions, including 10 failures and totaling 24, were as follows:

Company, Lease and Location	Int. Prod. Bbls.	Depth
ATASCOSA COUNTY—		
J. R. B. Moore, Reiley 1, 1011 ft nel and 1104 ft sel 102-ac tract, Anthony sur.	*	1750
BEE COUNTY—		
Dirks Bros et al, Mrs. William Rapp 1, 1650 ft sl & 990 ft el Blk 5, C. W. Hall sub, Uranga grant	175	3902
Heep Oil Corp, J. C. Wood 1, P. Crain sur, 521 ft nl and 521 ft el 25-ac tract	*	6010
BEXAR COUNTY—		
Berry-Hays Corp of Texas, City of S. A., 8960 ft el and 6322 ft nl, G. Nunes sur.	*	946
A. M. Blume, L. Ridder 3, 150 ft sl and 150 ft el tract 2, J. M. Baerrera sur No. 58	2	560
DUVAL COUNTY—		
Buffalo-Texas Drilling Syndicate, Inc., Saenz Escobar 1, San Francisco sur, Sjare 6, 1950 wl and 2800 ft nl, lease of 1755 acres....	*	3223
S. B. Cloyes & Alpha Petroleum Co, E. R. Hagist 1, 330 ft nl and 330 ft el, Blk 10, sec. 265.....	*	2172
Humble, Paul White 30, sec. 249...	240	2262
Magnolia, C. W. Hahl 1-C, sec. 61	130	2377
Russ Pet Co., E. Riley 4, sec. 46..	120	2265
Sun, Weiderkehr 62, 990 ft wl and 330 ft sl, sec. 361	*	3382
L. Weiderkehr 65, sec. 359	360	2287
GOLIAD COUNTY—		
Jane Oil Co., Grady Smith 2, B & B sur. No. 25	100	3704
JIM WELLS COUNTY—		
Magnolia, A. A. Seeligson 4, 2750 ft wl and 1320 ft nl, sec. 216.....	*	3258
KARNES COUNTY—		
Magnolia, Gua Porter 4, sec. 23, B & B sur.	275	3667
G. A. Ry, Mrs. S. E. Radford 2, 400 ft n No. 1	*	3845
LIVE OAK COUNTY—		
Loma Oil Co., L. Jacob 27-A, W. H. Jacob sur No. 7	100	1068
McMULLEN COUNTY—		
Stewart Smith & Storey, Jacob 1, 3501 ft s Texio Jacob 1, in John Fadden sur No. 8	75	864
REFUGIO COUNTY—		
Houston Oil Co., W. J. Heard 14, Refugio townsite	250	4950
Humble, Fannie Heard 5, Ximenes sur .	436	4380
J. F. B. Heard 7, Peoples sur..	950	4388
United Prod. Co., W. J. Fox 14, Hews & Brown sur	*	6002
WILLIAMSON COUNTY—		
G. L. Rowsey, Tr, John Reiger 4-A H. White sur	20	998
ZAPATA COUNTY—		
Robert Newton, Killam 1, 150 ft nwl and 150 ft swl blk 6, sec 182..	*	1605

*Failures; †Junked; ¶Million cu. ft. gas.

Emergency Operating Orders Issued for Tuleta

Austin, Texas.—A series of emergency rules for the spacing, drilling, completion and operation of wells in the new Tuleta field, Bee County, has been issued by the Texas Railroad Commission, and became effective as of July 27.

Ten-acre spacing with wells 330 feet from lease lines and 660 feet apart is provided for.

Allowables are to be on the acreage basis, with a maximum unit allowance of 15 acres to any one well.

Provision is made to require flowing wells to be produced through 2½-inch tubing. Gas-oil ratios are limited to 1500 feet per barrel. However, wells with higher gas-oil ratios that cannot be cut back may "produce a total volume of gas equivalent to 1500 times the maximum daily allowable of any other well producing from the same reservoir or sand."

The order carried a notice that a hearing to consider permanent rules for the field would be held as soon as operators made a request.

Humble Laying New South Texas Line

San Antonio, Texas.—Humble Pipe Line Company is enlarging the capacity of its pipe line from the Government Wells field to the main line going to Inglesides. It is laying about nine miles of eight-inch pipe to replace two four-inch lines in the section between the field and its main line near Benavides.

Commission Plans New Deviation Rule

Austin, Texas.—A new rule governing the deviation of wells drilled in Texas is now under consideration by the Texas Railroad Commission in their efforts to prevent the repetition of such an operation as resulted in the drilling of Adeltex Lewellyn No. 2 in the Conroe field, Montgomery County.

With the assistance of the attorney general, the commission hopes to work out a rule that will be practical and at the same time entirely enforceable.

An important change will be a provision that no well drilled for oil or gas in Texas may be intentionally deviated. This ruling, in itself, would be sufficient to prevent a repetition of the situation which arose in the case of the Adeltex well.

On tracts of 20 acres or more, deviation of five degrees from the vertical would be permitted; only four degrees deviation would be permitted on tracts ranging in size from 10 to 20 acres; on those tracts smaller than 10 acres, only three degrees of deviation would be allowed.

This rule, it is believed, would prevent operators on small tracts near the edge of a field from completing their well beneath the offset lease.

Deep West Columbia Test Is Shut Down

Houston. — Miramar Corporation's Hogg 3, M. Varner survey, in the West Columbia field of Brazoria County was shut down at 5165 feet after having trouble with heaving shale. A drill stem test from 4837 to 4901 feet showed 20 fourbles of salt water and mud. The tester was opened nine and a half minutes and during that time the well made some gas.

The Texas Company's Hogg 84, in the G. Tenniville survey, was the only other active well in the field. It was drilling in shale at 4440 feet. It is reported Stanolind Oil & Gas Company purchased acreage in the northeast corner of the county paying over $300 per acre in cash and $600 out of oil.

East Texas Property Transactions Completed

Tyler, Texas.—Property deals in the East Texas field have been less frequent in recent weeks, and the bulk of the trading has been transacted between independent companies.

Producers Purchasing Company, controlled by Corzelius Brothers, Fort Worth, sold its W. H. Frederick 23-acre lease, Juan Ximines Survey, Joiner Area, with four pumping wells, to American-Liberty Oil Company, Dallas, for a reported consideration of $77,500 cash and an additional $6,400 payable from oil.

Dale Sneed, Tyler, and associates are credited with having contracted to sell their Grif Davis 15-acre lease, W. P. Chism Survey, Gregg County, with three wells, to Roger Lacy et al for a total consideration of $101,100. This deal is supposed to involve $20,000 cash; $33,979.56 in deferred notes; and a $36,120.44 outstanding oil payment due from the lease.

Tomball Land Suit Trial Begins Today

Austin, Texas.—Trial will begin in Austin on Monday, July 23, in a case involving 104 acres of land in the heart of the Tomball field to which the State of Texas claims title.

The land lies south of the Goodrich and Hooper surveys, and is in the north portion of the I. & G. N. survey. The state alleges that no valid patent to this part of the survey was ever issued.

Deep Port Neches Test Abandoned

Houston.—The Texas Company's Orange National Bank 2, at Port Neches, Polk County, was abandoned at the close of the week at 7266 feet. This well was an important test for the field and was the first well in the field to uncover any salt and to prove this area as a deep seated salt dome. Salt was found at 7250 feet. The well was plugged back to 3828 feet to test sands found from 3690 feet to 3720 feet and after testing the sands the operators abandoned the test. It is estimated that the well will make 20 barrels per day on a pump. The test would not flow and the operators have taken down the derrick and moved it to Orange National Bank 1, to work over this old well.

Houston Wildcat Abandoned at 6031 Feet

Houston.—Loring Oil & Gas Company, Westmoreland Farms 1, 1½ miles southwest of Houston and in the J. M. Swisher Survey of Harris County, was abandoned at the close of the week at 6031 feet after finding the Dibollensis from 4112 to 4116 feet, Discorbis from 4166 to 4169 feet and the Heterostegina from 4268 to 4306 feet with an elevation of 84 feet. Base of the Miocene was found at 3015 feet.

Boling Flank Test Shows in New Sand

Houston.—On the southeast flank of the Boling field, in the J. Scott Survey, of Fort Bend County, J. E. Seiber's Farmer 1, made a drill stem test during the past week from 4399 to 4424 feet showing 21 fourbles of 23 gravity oil in 10 minutes through a three eighths-inch choke on bottom and a quarter-inch choke on top. The well also showed four fourbles of mud. Last reports on the test was that it was coring ahead. Several geologists think the oil is coming from the upper Frio. If it is true the test opens a new pay sand for the field.

The well topped the Oligocene at 4090 feet, Discorbis at 4150 feet. From 4399 to 4401 feet a sand was encountered and from 4401 to 4415 feet another sand was found that showed oil, and from 4415 to 4418 feet another oil show. This test was originally a deep Cockfield test for the field. On a core from 3338 to 3347 feet there was no show and at 3705 feet hard shale was encountered. The operators have approximately 1300 acres in the area.

This deep salt dome has 70 wells producing only 335 barrels of oil per day and with the discovery of the new deep sand found by the Farmer well no doubt some extensive deep drilling will be started. The principal lease owners are Gulf Production Company, The Texas Company, Magnolia Petroleum Company, Week-Gayle Oil Company, Sun Oil Company, Atlantic Oil Producing Company, Humble Oil & Refining Company, Boling Dome Oil Company and the Sinclair Prairie Oil Company.

In the Blue Ridge field of the same county, Mills Bennett Production Company's Lucher 1 was coring ahead below 4479 feet. This deep test topped the Vicksburg from 4250 to 4445 feet and the Jackson from 4469 to 4479 feet.

Two Wildcats Started In Liberty County

Houston.—Two important locations were made during the past week in Liberty County. Magnolia Petroleum Company made location for its Maco Stewart 1, 2600 feet east, 1370 feet south of the northwest corner of the west 350 acre of the Maco Stewart 586-acre tract in the Aaron Cherry Survey, east of the river. The other location is Gulf Production Company's Kirby C-5, in the Cleveland field, J. Pleasant Survey,

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Manvel Field Is Given Extension

Houston.—Gulf Production Company's Colby 1, 800 feet south of production in the Manvel field of Brazoria County, came in at the close of the week making 294 barrels in 10 hours through a quarter-inch choke from 5118 feet. Tubing pressure was 675 pounds and the casing pressure 800 pounds. Seven-inch casing was set at 5081 feet and 10-inch pipe at 1231 feet. Top of the sand was found at 5093 feet. The company had a gas show at 5067 feet.

The importance, outside of the extension, of this test is that Gulf Production Company is added to the list of operators in the field. Heretofore the field was controled solely by The Texas Company, but two weeks ago Harrison & Abercrombie Leweliyn 1, came in making 25 barrels per hour on a half-inch choke, to make them the second operator to go into the field. The completion of the Colby well marks Gulf Production Company the third operator for the area.

Jack Clark's Speer 1, six miles south of Manvel and in the J. F. Pinckney survey of Brazoria County, was preparing to make a drill stem test at 4254 feet. It is reported the well is running high and has had sevearl shows.

Around the Old Ocean Prospect, in the above county, Harrison & Abercrombie was making location for its Bernard Land and Development 1, in the Chas. Breen Survey, approximately 1000 feet each way out of the southeast corner of Lot 23.

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Hardin County Wells At Important Depths

Houston.—In the Saratoga field of Hordin County, Seismo Oil Company is reported to have let Hines Brothers take over its Caswell 1 test. This test started drilling in September, 1933, and has had considerable trouble. They had a fishing job at 3212 feet where they recovered 30 feet of drill pipe and at that depth the well was shut down and Hines Brothers took the test over.

On the south flank of the field Sinclair Prairie Oil Company's Teel 1, was drilling below 5602 feet. The contract depth of this well was 5500 feet.

In the Sour Lake field of the same county, Humble Oil & Refining Company's Kirby 1, S. Jackson Survey, was drilling below 5765 feet. This deep test is on the northwest flank of the field. The well topped the Discorbis at 4168 feet, Heterostegina 4396, Frio 4635 and the Vicksburg at 5700 feet. It is the second deep test for the field. Yount-Lee Oil Company's Lynn Fee 6, was the first deep test.

Alpha Petroleum Corporation's Steinberger 1, 150 feet west of the Pharr et al's Bernard 1, which discovered the Cockfield sand for the area, was waiting on a packer after cleaning the hole out and they are now circulating mud. The bottom of the hole is 7012 feet.

Wilcox Oil & Gas Company's Sternberg 1, north of Kountz, in the G. Dorsey Survey, was drilling below 5182 feet after coring shaley sand with streaks of lime from 5139 to 5141 feet. The well is thought to be in the Hockleyensis formation, if so it is running extremely high.

Hankamer Field Test Coring Ahead

Houston.—In the Hankamer field of Liberty County, Miramar Corporation's Crowe-Jacobs 2, in the H. & T. C. 21, B-1 survey was coring ahead below 5180 feet after making a drill stem test from 4624-4652 feet. The well showed 13 fourbles of salt water and some oil with no gas. In this deep seated salt dome no cap rock or salt has been encountered. It was discovered by torsion balance in 1928 and 1929 by Gulf Production Company. The same operators have made a south extension test to the field in its Stengler 1, which is located in the V. Barrow survey.

Northwest of the Hankamer field and in the area of Hardin, southwest of the old Hoffer et al Smith 1, which was abandoned at 2535 feet, in the Amos Green survey, Greer and Frazier has sold to several of the major oil companies $45,000 worth of acreage out of their block. The companies reported buying are, Humble Oil & Refining Company, Magnolia Petroleum Company, Sun Oil Company, Gulf Production Company and others. Greer & Frazier are to drill a well in the area and the above companies are to pay when the well is finaled.

Texas Coast Failures Exceed Producers

Houston. — Completions along the Texas Gulf Coast during the past week totaled 21 of which nine were producing pumping wells with an initial production of 3282 barrels of oil per day. There were 10 failures in the area along with two gas wells which are making 102,500,000 cubic feet of gas daily. Conroe field of Montgomery County did not register a single completion in the seven days.

Danciger Oil & Refining Company's W. S. Hunt B-1, in the Pledger field of Brazoria County and in the W. Carson survey, was completed for an estimated 100,000,000 cubic feet of gas daily through a small choke. The gas well produced water along with the gas. The operators now have two wells drilling in the field, Stark & Barrow 1, which is in the Perry Austin survey, and W. S. Hunt A-4, which is a southwest offset to A-3, which was abandoned at 6797 feet.

In the Sour Lake field, Yount Lee Oil Company's Fee Lynn 6, in the S. Jackson survey, was completed as a dry hole at 7461 feet. The company left 2700 feet of drill pipe in the hole. This was the deepest well for the Sour Lake field, Hardin County. The well encountered approximately 3800 feet of salt.

Amerada Petroleum Corporation's

Seaburn 5, in the Stratton Ridge field of Brazoria County and in the Austin and Williams league survey, was abandoned at 7202 feet. The company experienced several fishing jobs on this test and at the total depth the operators had 19 joints of drill pipe stuck in the hole.

In Colorado County, Union Central Oil Company made location for its Mann 1, approximately three miles north of Eagle Lake in the above county and in the J. L. Dugat survey. The location was abandoned during the past week. It is rumored Humble Oil & Refining Company has been dealing with Union Central Oil Company for acreage.

Shell Petroleum Corporation's F. Schmidt 1, in the J. H. Bruner Survey in the Danbury field of Brazoria County, was abandoned at 1633 feet at the close of the week after fishing for junk in the hole. The derrick was skidded over and location was made for F. Schmidt A-1. The corporation has at present two other drilling wells in the field, the Haury 3, which is at 3725 feet and the Blakely Winston 6, which just recently made a drill stem test from 1554 to 1569 feet and showed 60 feet of mud and 700 feet of salt water through a quarter inch choke on top and bottom. The tester was open 20 minutes. The well is now drilling in shale at 2004 feet.

Company, Well and Location	Init. Prod. Bbls.	Depth
BARBERS HILL—		
Texas Gulf Prod. Co., Wilburn 4..	50	4947
Yount Lee Oil Co., Phillips 8	769	4782
DANBURY—		
Shell Pet. Corp., F. Schmidt 1....	*	1633
GOOSE CREEK—		
Humble O&R Co., Simms-Sweet 29	*	4025
LIVINGSTON—		
Gem Oil Co., Davis Holmes 1 (wo)	57	4347
Werby et al, Failing 1	96	4344
MANVEL—		
Gulf Prod. Co., Colby 1	575	5118
PIERCE JUNCTION—		
Harrison & Abercrombie, Ritter 4	415	3674
PLEDGER—		
Danciger Oil & Ref. Co., W. S. Hunt B-1 . .....¶	100	6875
PORT NECHES—		
The Texas Co., Orange Nat'l Bank 2	*	7667
RACCOON BEND—		
Humble O&R Co., Hardy B-4 (wo)	*	4450
Wilson B-5	*	4176
SOUR LAKE—		
Yount Lee Oil Co., Lynn Fee 6..	*	7461
STRATTON RIDGE—		
Amerada Pet. Corp., Seaburn 5....	*	7202
TOMBALL—		
Amerada & Stanolind, Rudal 4 ...	432	5577
Humble O&R Co., Quilter B-3 ...	624	5546
Theis 1 . .....¶	2½	5560
The Texas Co., Hirsch 2	264	5583
BRAZOS COUNTY—		
Aven & Buchana, Odom 1, on Kurten prospect, approx. 3 mi s & w of Scott's Klintworth 1, I. Curd sur.	*	30
COLORADO COUNTY—		
Union Central Oil Co., Mann 1....	*	....
HARRIS COUNTY—		
Loring Oil & Gas Co., Westmoreland 1, 1½ mi sw of Bellaire in the J. M. Swisher sur.	*	6012

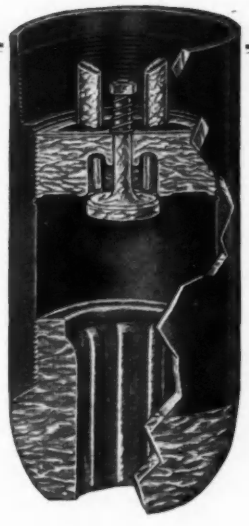
*Failures; †Junked; ¶Million cu. ft. gas.

Arriola Field Test Shows Salt Water

Houston.—On a drill stem test from 4250 to 4276 feet, Republic Production Company's Fee 8, in the Arriola field of Hardin County, showed 12 joints of salt water and mud in eight minutes through a quarter-inch choke on top and a five eighths-inch choke on bottom. The well also had a slight show of gas. It is below 4276 feet.

The same operators 2-X, was drilling in shale at 5618 feet. On a drill stem test from 3080 to 3095 feet, the latter well showed eight thribbles of salt water through a five eighths-inch choke in five minutes. At 4573 feet the hole was found to be off 11 degrees at the bottom and was plugged back to 2300 feet and drilled ahead to its present depth. The principal lease holders in the field are Republic Production Company and Houston Oil Company.

Republic Production Company's Dolbear 154, in the Hull field of Liberty County, J. Devore Survey, was washing at 5333 feet, which is the total depth. The company has four-inch drill pipe stuck at 3600 feet and they are washing over the pipe.



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Four Louisiana Coast Wildcats Abandoned

Lake Charles, La.—Four wildcats were abandoned along the Louisiana Gulf Coast during the past week. F. W. Martin et al's Cochran 1, south of Merryville, in Section 34-4s-12w, Beauregard Parish, was completed at 6526 feet after topping the Vicksburg at 3285 feet and the Hockleyensis at 5553 feet. This well was running high on the Vicksburg marker as compared to Tide Water Oil Company's Southwestern Lumber Company's 1, in Newton County. Humble Oil & Refining Company, Continental Oil Company, Barnsdall Oil Company, Simms Oil Company, Mid-Texas Oil Company all hold acreage surrounding the test. Several of the major oil companies are working the area to the north of the Cochrane well with geophysical instruments.

In Rapides Parish, J. L. Beck's Hexon & Simmons 1, Section 40-4s-1e, was abandoned at 2130 feet. Operators have been working on this test off and on for one year.

Four miles south of Little Lake in La Fourche Parish, Section 32-8s-22e, Ben Coyle & Texas Production Company's La Fourche Land Company 1 was abandoned at 4900 feet after having failed to uncover any promising sands. The well is located approximately mid-way between the Lake Bully Camp and the St. Denis prospects. At present geophysical work in this Parish has taken a slump.

On the La Rose Prospect in La Fourche Parish, in Section 6-17s-20e, Barnsdall Oil Company's Harang Plantation 2, was completed as a dry hole at 7216 feet. This is the second dry hole for the operators in the field. Harang Plantation 1 was completed as a failure at 7195 feet about two weeks ago. This test proved the prospect as it had shows of gas from 6430 to 6499 feet and oil and gas shows from 6614 to 6624 feet. Salt was encountered in the area at 7195 feet. The company has now made location for Harang Plantation 3, 1175 feet east, 1050 feet north of the southwest corner of Section 5-17s-20e. This prospect was discovered by seismograph in 1932 by Barnsdall Oil Company and also by surface indications.

Louisiana Coast Strip May Yield Another Field

Lake Charles, La.—Another new deep field along the narrow but prolific producing strip running east and west across southwest Louisiana is a distinct possibility, with Tide Water Oil Company's Bourgeois 1, flank test on the Welsh structure, Jefferson Davis Parish, coring ahead below 5950 feet after showing 28 gravity oil on a drill stem test at 5370 feet. This deep test is located about midway between the Iowa and Roanoke fields, and is apparently in exact line for lower production. This well was originally started as a 7000-foot test. It is located 205 feet south and 250 feet east of the center of Section 28-9s-5w, on the southwest flank of the field.

On a recent drill stem test at 5370 feet, through four-inch drill pipe, with a quarter-inch choke, the well showed 150 feet of clean, 28 gravity oil and 60 feet of salt water. At 5760 feet a showing of cut oil was encountered.

Area an Important Reserve

A very narrow strip, starting with the Vinton field on the west, and ending with the Pt. Barre field on the east, has yielded the bulk of all oil produced along the Louisiana Gulf Coast. The strip is 96 miles long, and ranges from six to eight miles in width along its intermediate section.

The Louisiana Gulf Coast has produced approximately 159,000,000 barrels of oil, of which the Vinton-Pt. Barre strip has yielded almost 135,000,000 barrels. Fields along this strip are Vinton, Edgerly, Sulphur, East Hackberry, Lockport, Iowa, Roanoke, Jennings, Bosco and Pt. Barre. East Hackberry and Pt. Barre are slightly out of line, the former being south and the latter north of the main east-west trend.

Vinton has produced 39,800,000 barrels, Edgerly 8,220,000 barrels, Sulphur 6,600,000 barrels, East Hackberry 8,175,000 barrels, Lockport 12,160,000 barrels, Iowa 5,400,000 barrels, Jennings 50,654,000 barrels, and Pt. Barre 3,280,000 barrels. Bosco and Roanoke are new fields along the trend.

Importance of recent deep discoveries along this narrow strip can hardly be over-emphasized. They opened a tremendous new reserve, and point to deeper production in many additional fields and prospects.

This Louisiana trend is a continuation of a similar trend in Texas, and represents the heart of Louisiana's reserves. The new Bosco and Roanoke fields are very deep, and these discoveries have reopened several districts that were temporarily abandoned because of unsuccessful shallow tests.

New Bosco Extension Causes More Drilling

Lake Charles, La.—The third producer for the Bosco field of Acadia Parish, came in at the close of the week to extend the producing territory 2500 feet to the west. Superior Oil Company of California's E. Mire 1, Section 33-8s-3e, was completed July 18, 1934, for 884 barrels gross and 871 barrels net 39 gravity oil from 8088 feet, which makes this well the deepest producer in the field. At 6 p.m. that night the oil was turned into the tanks. The oil flowed through a 27/64-inch choke with a tubing pressure of 1410 pounds and casing pressure of 1575 pounds.

The first rate of flow was estimated at 90 barrels per hour. On the first 24-hour gauge the well made 1096 barrels of oil through a 17/64-inch choke with a tubing pressure of 1410 pounds and casing pressure of 1600 pounds. Royalty is reported selling for $750 base in the area of the wells.

This well is the first well to be completed in the western direction. Iseringhauser 1, east offset to the discovery well came in at the rate of 678 barrels of 38 gravity oil in 20 hours through a quarter-inch choke from 7850 feet. The well is now making 1750 barrels gross and 1692 barrels net oil per day with a tubing pressure of 2030 pounds and the casing pressure is 2400 pounds. The choke is 24/64-inches. The well is producing 4,206,000 cubic feet of gas per day.

The discovery well for the field is now making 870 barrels gross and 853 barrels net 38.7 gravity oil through a 16/64-inch choke with a tubing pressure of 1390 pounds, and flowing 450,000 cubic feet of gas daily. All three of the wells are producing from the Discorbis zone of the Oligocene.

Since discovery of the field April 26, 1934, Superior Oil Company has completed an average of one well each month with four wells at present nearing the pay sands.

Since the completion of the E. Mire well, the company has made 10 new locations in the field, making a total of 16 wells, including the discovery well. The new locations are as follow: Leonard Savoie 1, 814 feet west and 658 feet north of the southeast corner of Section 26-8s-3e, in St. Landry Parish, the well is approximately 8500 feet northeast of the discovery well. The company has just completed the derrick. August Martinez 1, 2510.6 feet south and 1057.2 feet west of the northeast corner of Section 35-8s-3e, 8000 feet east and a little south of the discovery well, derrick has been completed. Walter V. Larcade 1, 462.4 feet east and 500.2 feet south of the northwest corner of Section 35-8s-3e. Walter

V. Larcade 2, 1500.4 feet south and 467.3 feet east of the northwest corner of Section 35-8s-3e. Sidney Fall 1, 542.9 feet west and 511.4 feet north of the southeast corner of Section 27-8s-3e. The well is 3500 feet east of the first producer and the cellar is now being dug. Lucien Lavergne 1, 596 feet east and 330.3 feet north of the southwest corner of Section 27-8s-3e. All the above wells are in St. Landry Parish.

In Acadia Parish, Eddie Prejean (Alex Forrestier) 1, 2021.3 feet west and 439.4 feet south of the northeast corner of Section 34-8s-3e, cellar is being dug. Mrs. Estelle Comeaux et al 1, 675.6 feet west and 511.4 feet south of the northeast corner of Section 34-8s-3e, is pouring foundation. It is 3000 feet due east of the discovery well. Eulide Leblanc 1, 1873 feet south and 673.2 feet west of northeast corner of Section 33-8s-3e, Moise Lavergne 1, 269.7 feet west and 98 feet north of the southeast corner of Section 28-8s-3e, are other locations.

The four tests now drilling are: J. S. Arceneaux 1, Section 28-8s-3e, drilling in sand and shale at 8277 feet; Leo Kahn 1, Section 33-8s-3e, sidetracking again at 6100 feet after fishing for some junk in the hole; Richard Lovnattie 1, Section 34-8s-3e, drilling in sand and shale at 7907 feet; Marcellos Savoie 1, Section 27-8s-3e, drilling in sand and shale at 7816 feet.

This deep seated salt dome, however, salt has not been encountered, was discovered by seismograph reflection in 1929 by Pure Oil Company and was sub-leased to Superior Oil Company of California. Due to expiration dates on some of the leases operators are developing the area very rapidly. The companies have approximately 6500 acres in a solid block in the field and the only other company in the field is the Standard Oil Company of Kansas which has about 45 acres in the vicinity of the big block. This company's well is known as Nouton 1, and is east of the Leo Kahn 1. The Nouton well is now shut down at 1395 feet after setting surface casing at that depth. Standard of Kansas is waiting the outcome of the Kahn well before resuming drilling.

Humble Oil & Refining Company and Shell Petroleum Corporation hold a large block outside of the Pure Oil Company and Superior Oil Company's block. Both operators now have their geophysical crews in the area working with torsion balance and seismograph instruments.

Superior Oil Company of California has been very active in the South Louisiana Coastal area during the past six months, leasing and doing geophysical work. Their geophysical crews have been working all the area to the north and northeast of Carencro in Lafayette Parish. The company is reported to have taken geophysical option on 10,000 acres in both Livingston and East Baton Rouge Parishes. The option is for six months. Around Point Pleasant, on the west flank of the Mississippi River the company is reported taking a block of 8000 acres and on the east bank they have taken 7000 acres. Humble Oil & Refining Company is also reported leasing in this area on geophysical option. This area is located in Iberville Parish. In the southern part of Livingston Parish, Superior Oil Company is also working up a large block for geophysical work.

To the northwest, around the Church Point prospect, Woodley Petroleum Company is reported to be leasing to the southeast of their test now, which is drilling at 6818 feet in shale. The well is known as Woodley Petroleum Company's Daigle 1, Section 24-7s-1e. The well is one and a half miles due east of Coe. This test is running low, as reported by several of the major oil companies. Several of the oil operators are now shooting in the area with geophysical instruments. This prospect was discovered by gas seeps, salt water, and was later checked by seismograph reflection in 1933. The eight operators own approximately 14,000 acres in the vicinity of the drilling well. Superior Oil Company of California controls approximately half interest in the large solid block.

Two New Producers At Livingston

Houston.—Two more producers were added to the Livingston field of Polk County when Gem Oil Company completed its Davis Holmes 1, which was formerly Dick Schwab's Davis Holmes 1, and Werby et al Failing 1, came in for an initial production of 153 barrels per day.

Gem Oil Company's well was drilled deeper from 4311 to 4347 feet and made 57 barrels in 24 hours through a quarter-inch choke. The most important test was that of Werby et al's Failing 1, three quarters of a mile north of previous producing limits. The well came in for 155 barrels in 44 hours through a twelve sixty fourths-inch choke with a tubing pressure of 1555 pounds and casing pressure of 1680 pounds.

Eleven Louisiana Coastal Completions

Lake Charles, La. — Completions along the Louisiana Gulf Coast during the past week showed .a marked increase over the previous week. Of 11 completions, six resulted in producing wells with an initial production of 4460 barrels of pipe line oil per day. There were five failures.

Completions along the Louisiana

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coastal area during the past week were as follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSCO—		
Superior Oil Co of California, E. Mire 1	1096	8088
CALLIOU ISLAND—		
The Texas Co., State Calliou Island 10, (wo)	2469	6142
LEESVILLE—		
Gulf Refining Co., Allen Land 1, (wo)	800	3734
The Texas Co., L.L.E. Leesville 17	*	4825
LOCKPORT—		
Magnolia Pet Co., Miller 8, (wo)	30	6718
Miller 26, (wo)	60	4388
VINTON—		
Wilson Broach Oil Co., Wilson 11, (wo)	5	3557
BEAUREGARD PARISH—		
F. W. Martin et al, Cochran 1, s of Merryville, sec 34-8s-12w	*	6526
LA FOURCHE PARISH—		
Barnsdall Oil Co., Harang Plantation 2	*	7216
Ben Coyle Oil Co., La Fourche Land Co. 1	*	4900
RAPIDES PARISH—		
J. L. Beck, Hexon & Simmons 1, sec 40-4s-1e	*	2130

*Failures; †Junked; ¶Million cu. ft. gas.

Louisiana Completion Record Disappointing

Shreveport, La.—Three small oil producers and two small gassers were the only commercial wells among 14 completions last week in North Louisiana fields. The total initial production of the three oil wells was 190 barrels daily. Two were in Zwolle and one in Converse, both in Sabine Parish, and both chalk rock fields.

The southeast limits of the Nacatosh gas producing horizon in the Blanchard gas field apparently was defined by completion of a salt water hole in SW SE Section 34-19n-16w, Caddo Parish.

Company, Well and Location	Init. Prod. Bbls.	Depth
BOSSIER PARISH—		
Moffitt et al, C. A. Antrim 1, sw ne 36-22n-12w	*	3502
CADDO PARISH—		
Shoreline Oil Corp., Standard Oil Co. C-1, nw ne 15-21n-15w	¶½	1085
Pyramid-Barbare, Hearne 1, sw se 34-19n-16w	*	935
George Le Grand, D. T. Fulmer 1, nw sw 1-11n-16w	*	2255
GRANT PARISH—		
Grant Mineral Trust, Cameron 1, sw nw 26-7n-3w	*	700
OUACHITA PARISH (Monroe)—		
Ark. La. Pipe Line Co., Rea & Green 10, se sw 33-19n-4e	¶1¼	2190
SABINE PARISH (Converse)—		
Helena O&G Co., A. J. Burkett 6, nw ne 10-9n-13w	*	1989
Lanier & Rogers, Paul 2, se ne 9-9n-13w	*	2022
L. L. Posey, Tr., A. J. Burkett 3, ne nw 10-9n-13w	*	1984
J. D. Reynolds, G. I. Paul Est. 3, sw ne 9-9n-13w	75	2005
Stumpf & McFall, Paul Estate 1, blk 31, sec 10-9n-13w	*	1976
SABINE PARISH (Zwolle)—		
Williams & Spier, C. W. Marr 1, nw ne 7-7n-10w	*	2810
Monroe Prod. Co., Sabine Lbr. Co. 7, nw se 11-7n-12w	100	2399
Texas General Pet. Co., S. S. Martinez 1, se ne 4-7n-13w	15	2360

*Failures; †Junked; ¶Million cu. ft. gas.

Leesville Allowable Is Redistributed

Shreveport, La.—Due to the recent completion of several large wells in the Leesville field of South Louisiana, Dr. J. A. Shaw has re-allocated the 12,750-barrel daily allowable for that pool among the five producing companies in that area, for the last half of July. The total allowable for the pool was not affected, it merely being redistributed as a result of the increased yield during the first half of the month.

Sixteen Drilling Permits Issued in Lounsiana

Shreveport, La.—Sixteen drilling permits were issued by the minerals division of the Louisiana Conservation Commission last week. Nine of the new tests are for south Louisiana divided among the following parishes: Calcasieu, one; Cameron, one; Iberia, four; Jefferson Davis, two; and La Fourche, one. The seven north Louisiana tests were divided among the following parishes: Bossier, two; Caddo, one; DeSoto, one and Sabine, three.

Location Announced For Sabine Parish

Shreveport, La.—O. H. Grissom of Longview, Texas, last week made location for Fee 1, Section 13-6n-13w, a wildcat in Sabine Parish, on a block of about 1000 acres of which he owns 320 acres in fee. The test is planned for 3500 feet.

United Buying More Leases at Elm Grove

Shreveport, La.—United Gas Public Service Company is adding to its leases in the Elm Grove gas field, Bossier Parish. Last week this company leased 685 acres in Sections 16, 18, 19, 20 and 21-16n-11w, for $6,850 cash. It has a number of gas wells in this field and recently opened the lower Cretaceous horizon as a new producing horizon.

Bossier Well Under Control After Blowout

Shreveport, La.—Having successfully killed a gas blowout and salt water flow in W. H. Werner 1, SE SE Section 7-17n-11w, Bossier Parish, Producers Oil & Gas Company last week was arranging to make a drill stem test of the well at 3973 feet in lower Cretaceous.

The well blew out suddenly with drill stem still in the hole, making an estimated six million cubic feet of gas and a flow of salt water. Use of heavy mud killed the well and drill stem was recovered. The last casing set in the well was a string of seven-inch cemented at 2846 feet.

This test is on a 2000-acre block and is one and a fourth-mile northeast of nearest production.

Arkansas Operators Start Three Tests

El Dorado, Ark.—Three new first reports were added to Arkansas drilling operations last week, two of which were southern wildcats.

In Hempstead County near Patmos, F. W. Martin & Company has derrick up for Lafferty 1, SE NW Section 17-14-24, and in La Fayette County near Stamps, A. L. Erwin et al made location for Bodcaw 1, center NE NW Section 19-16-23.

In the Urbana district, Union County, Marine Oil Company has derrick up for K. D. Parker 1, SWC NE NW Section 2-18-13.

Miller County, Arkansas

Texarkana, Ark.—W. F. Lacey of Shreveport, drilling a wildcat test four miles south of E. L. Young et al's R. M. Patterson 1, Section 5-19-28, Miller County, Arkansas, near Bloomburg, that claimed an oil show in Woodbine at 3655 feet, last week logged the top of red shale of Woodbine age at 3696 feet; elevation is 316 feet. Lacey tested the Woodbine at 3705 to 3720 feet with no show and logged top of lower Cretaceous at 3748 feet, later being reported making hole at 3808 feet in hard lime. Elevation of the Young et al test was 405 feet.

Lacey's test is about eight miles northeast of the Rodessa gas field in Caddo Parish, Louisiana, that produces a highly saturated gas at 5600-5800 feet in oolitic lime of Glen Rose age.

Arkansas Has Three New Oil Wells; One Failure

El Dorado, Ark. — A 350-barrel pumping well in the Garland City field of Miller County, which boosted the daily average production of that district, the youngest in Arkansas, to 1545 barrels daily, was the largest of three oil wells completed in that state last week, for a combined daily initial of 440 barrels.

A 15-barrel pumper on the north edge of the old Stephens field, Columbia County, and a 75-barrel pumper in the Urbana district, Union County, that plugged back to 3564 feet after being dry at 3618 feet, were the state's two other producers for the week. A

wildcat in Jefferson County, inactive for some time, was abandoned.

Completions last week in Arkansas follow:

Company, Well and Location	Init. Prod. Bbls.	Depth
COLUMBIA COUNTY (Stephens)—		
O. F. Whittaker, C. C. Hall 1, sw nw 10-15-20	15	2156
JEFFERSON COUNTY (Pine Bluff)—		
R. V. Harrell et al, McGaughey 1, nw nw 22-7s-10w	*	1550
MILLER COUNTY (Garland City)—		
Arkanva Oil Corp. (Murdock et al), Dr. Beck B-2, se se 33-15-26	350	2923
UNION COUNTY (Urbana)—		
McCreslenn Oil Co., Doty Norman A-1, ne se 3-18-13 (sec comp.)	75	3564

*Failures; †Junked; ¶Million cu. ft. gas.

Mississippi Failure at Near Record Depth

Jackson, Miss.—The second deepest hole ever drilled in the Southeastern States was abandoned last week when United Gas Public Service Company abandoned a geophysically located wildcat in Greene County, southeast Mississippi "in the trend" at 7439 feet. Elevation was 280 feet.

The depth record for the Southeastern States is held by Mississippi where Eastman Gardiner et al a year ago drilled an 8002-foot hole in Covington County, South Mississippi.

Two first reports were added to Mississippi drilling operations last week, one a wildcat, and the other a test north of the Jackson gas field in Hinds County. The new wildcat is Dalton Development Company's Bounds 1, SW SE Section 34-7n-15e, Lauderdale County, east central Mississippi. Derrick is up.

North of the Jackson gas field, Alexander & Weaver are rigging Mayes & Gordon 1, 217 south and 552 west NWc NE Section 36-6n-1e.

The completion last week in Mississippi follows:

Company, Well and Location	Init. Prod. Bbls.	Depth
GREENE COUNTY—		
United Gas, 1326 e and 3951 n swc 30-1n-5w	*	7439

*Failures; †Junked; ¶Million cu. ft. gas.

Jackson Gas Field Statistical Correction

Jackson, Miss.—In THE OIL WEEKLY of July 9, it was stated that the Jackson, Mississippi, gas field had produced a total of 29,819,662,000,000 cubic feet of gas up to July 1. This was in error as the figure should have been 29,819,662,000 cubic feet.

Mobile, Ala.—Edward C. Lawson of Tulsa, Oklahoma, has abandoned plans to drill a test on a 10,000-acre block recently assembled on the Jackson Fault in Clarke County, Alabama, and has allowed the leases to lapse. The block was centered in township 6 north, range 4 east.

New Completions Boost Potential of Hobbs Field

Hobbs, New Mexico—Two completions in the Hobbs field last week included a big oil producer by Shell Petroleum Corporation on the border line of the water table on the west edge of the structure. This concern's Nora Berry 3, located near center SE Section 31-18s-38e, earned an initial rating of 11,773 barrels of oil, and an allowable of 211 barrels daily, after being treated with 1000 gallons of acid solution at 4225 feet, or 585 feet below sea level. Prior to acid treatment it flowed at rate of 8150 barrels of fluid, eight percent b. s. & w. with 6,915,000 cubic feet of gas.

Continental Oil Company placed a new unit on production in completing its W. D. Grimes 1, SWc SE Section 28-18s-38e, with an unofficial flow of 4552 barrels of oil and 14,900,000 cubic feet of gas daily at 4217 feet, or 569 feet below sea level. A larger potential is expected to follow the treatment of the lime formation with 1000 gallons of acid. Stanolind Oil & Gas Company, owner of the discovery leasehold at Hobbs, has resumed development work through the staking of location for B. H. Turner 8, C NW NW Section 34-18s-38e, to drill a west offset to outpost completion recently scored by Skelly Oil Company's Turner 2. Gypsy Oil Company has moved in rotary to drill Graham-State 3, SWc NE Section 24-18s-37e, while Shell Petroleum Corporation has derrick in place to drill W. D. Grimes 4, SEc SW Section 28-18s-38e.

These new completions and further use of acid on old producers boosted the potential daily output of the Hobbs field to 1,953,189 barrels, or a gain of 57,895 barrels, for the first half of July, according to figures prepared by Umpire C. G. Staley. The allowable of the field also was increased 1723 barrels daily, making the new quota 36,704 barrels daily.

The Eunice field added a single producer last week when Gypsy Oil Company scored its first well in completing State-Bell 1, C SW SE Section 8-21-36, flowing 358 barrels oil and 1,800,000 cubic feet of gas daily from saturated lime at

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3905-3929 feet. This is a light well for the field, but was given the maximum allowable of 191 barrels daily. Top of lime was logged at 2885 feet, with an elevation of 3605 feet. Tide Water Oil Company, Darby and Devonian have moved in derrick to drill Foster-State 2, C SE NE Section 8-21s-36e.

Large Well Found At East Iles Dome

Craig, Colo.—Stanolind Oil & Gas Company completed Parkinson 6, NW Section 23-4n-79w, in the East Iles Dome field, Moffat County, northeastern Colorado, for 3024 barrels initial. The test averaged 126 barrels per hour in a 12-hour gauge, and then was beaned down to 250 barrels daily through a 5/32-inch choke. The hole is bottomed at 3336 feet in the Sundance, which was topped at 3311 feet. The 8⅝-inch production string was set in the Sundance at 3314 feet. The well did not standardize to drill in as have all other Iles completions. The company is moving in rotary equipment to core through the Sundance in Parkinson 33, SE Section 22-4n-92w. It is an old well completed in 1928 and is one location south of the discovery well. Company wishes to log the thickness of the Sundance at the high of the East Iles dome.

East Shelby Field Activity Increases

Shelby, Mont.—Frazier et al's Johnson 1, NE NE Section 29-33n-2e, in the East Shelby field, Devon area, Toole County, found a 4,000,000 cubic foot flow of gas at 795 feet. Senator C. Leonard Smith of Denver started a new test in the field bringing the total operations to seven. Drilling operations in the Smith test follow: Lake City Oil Co. 1, SE Section 18-33n-2e, a first report; moving in. McDonough 1, CNW NW Section 17; swabbing and cleaning out with total depth at 1570 feet. Halverson 1, SE Section 18; moving in material. Federal Land Bank 1, SE Section 11, and Eckholt 1, SE Section 6, are rigging up.

Whitlash District

Whitlash, Mont.—After missing the oil pay in the Cut Bank sand where Schaffer 1, developed a 25-barrel flow, Western Natural Gas Company has plugged back and saved Schaffer 2, C SE NE Section 33-37n-4e, for 1,000,000 cubic feet of gas. Production is coming from the basal Colorado between 1565-85 feet. Test was plugged back from 2501 feet. John Wild and associates are spudding a Whitlash test, Mahoney 2, W½ SW SE Section 23-37n-42w.

One Completion in Wyoming Black Oil Area

Cody, Wyo.—One completion, a failure, was reported from the black oil fields in northern Wyoming. Henderson Producing Company's Government 3-H-9, C SE NE Section 31-58n-99w, is plugging and abandoning at 1780 feet. Operators were unable to lower 8¼-inch casing for water shutoff at 1765 feet.

Ohio Oil Company's Byron-Union 2, SE NE Section 22-66n-97w, in the Byron field, Big Horn County, is waiting for cement to set around the 12½-inch casing at 348 feet.

Paul Stock's Government 1, SE SE NE Section 29-51n-100w, in the Oregon Basin field, is drilling at 3000 feet.

Argo Oil Company's Ellen 10, NW Section 14-44n-98w, in Hamilton Dome field, Hot Springs County, is drilling at 2050 feet.

Stanolind Oil & Gas Company's Government 6, NW NW Section 25-58n-98w, in the Frannie field, Park County, is building derrick.

Bowdoin Gas Field

Malta, Mont.—The Montana Utilities Gas Company's Styles 1, C NW NW Section 23-31n-34e, a first report from the Bowdoin gas field, Phillips County, north central Montana, is spudding at 200 feet. The company plans to drill several more gas wells to supply fuel for the Fort Peck reclamation project.

West Mule Creek First Deep Test Finds Oil

Lusk, Wyo.—The West Mule Creek semi-wildcat test, Inter-State Oil & Refining Company and Fall River Royalty Company's Morell 1, NW NE SE Section 2-39n-61w, topped the Minnelusa at 2840 feet, and has 500 feet of oil standing in the hole. Operators are pulling four-inch casing preparatory to underreaming six-inch casing to bottom.

The test is located three quarters of a mile southwest of the shallow production in the West Mule Creek field, Niobrara County. A pipe line extends from the East Mule Creek field, through the heart of West Mule Creek, eight miles northwest to loading racks on the Burlington railroad. Morrel 1 is the first well to test deep production in the West Mule Creek field, although the East Mule Creek field has been producing oil from the Minnelusa since 1919.

The West Mule Creek structure is a symmetrical anticline with its axis running north and south. Based on the Dakota sandstone, it has 750 feet of closure approximately twice that of the East Mule Creek field. The east and west domes lie on the axis of the Hartville uplift between Old Woman Creek anticline and the Black Hills.

The well had shows of oil in the Muddy between 305-30 feet, and the Dakota between 397-405 feet, and an unidentified sand between 470-482 feet. It spudded August 1, 1931, and started in the Mowry shale member of the Graneros.

Cut Bank Pipe Line To Be Completed Soon

Cut Bank, Mont.—Toronto Pipe Line Company, subsidiary of British-American Oil Company, Ltd., of Toronto, Canada, expects to complete and put into operation by August 15, its 26-mile, five-inch oil line from the Cut Bank field in the northwestern portion of the state to Coutts, in south central Alberta, Canada, where the refinery of the parent company is located. Work was commenced early in June by Ford, Bacon and Davis Construction Company. One main station will be required to boost oil to the refinery. This will be located at the field where one 80,000-barrel and two 10,000-barrel tanks will be constructed. British-American Oil Producing Company has been purchasing crude in the Cut Bank field for some time and transporting into Coutts by tank car and other company lines.

Dry Creek

Billings, Mont.—Ohio Oil Company's Agnes Maddox 14, NW NW Section 10-7s-21e, in the Dry Creek oil and gas field, Carbon County, southern Montana, is drilling at 4250 feet. Objective, the Dakota, is expected at about one mile in depth.

Two Wells Completed In Cut Bank Field

Cut Bank, Mont.—The Texas Company completed two wells in the Cut Bank field this week and has a third flowing well delayed in completion due to a fishing job. The Texas Company's H. H. Antrim 3, Lot 2, Section 34-35n-6w, swabbed 185 barrels initial. The Cut Bank was logged between 2918-2939 feet and the well drilled to 2945 feet. Fee 3, 66 feet south of the center of Section 15-35n-6w, swabbed 100 barrels initial with the Cut Bank between 2857-2912 feet and total depth at 2916 feet. The company's J. B. Kerns 1, SW NE Section 23-35n-6w, flowed 107 barrels in 19 hours with hole bottomed at 2841 feet. The operators are fishing at 2810 feet. H. H. Antrim 4, Lot 3, Section 34-35n-6w, is waiting for spudder to drill in with the seven-inch production string cemented on top of the Cut Bank at 2908 feet. This

test cored to 2918 feet and showed good saturation.

Annand & Hutchings' Bonnett 1, NW SE Section 10-32n-5w, in the south field, is a near completion. The test had a show of oil at 2912-15 feet, but operators dropped six-inch string as they were running it to bottom. They are now pulling casing to replace collapsed joints.

Producers Development Syndicate's Helgason 1, NW NW Section 29-32n-4w, east extension test to the south field, is drilling ahead slowly from 2690 feet. Operators ran the six-inch string to 2679 feet.

Pumping results on recent completions were as follows: The Texas Company's Morrison 1 M-357, Lot 8, 22-35n-6w, 11 barrels in 16 hours. The Texas Company's Purdy 3, NW SW 35-35n-6w, pumping 70 barrels daily.

Hiawatha Dome Field

Rock Springs, Wyo. — Mountain Fuel Supply Company's Florence Wilson 4-B, C NE NW Section 23-12n-100w, on the Colorado side of the Hiawatha Dome gas field, is coring below 2034 feet after drilling out plug with 10¾-inch casing set at that depth. The Texas Company's Van Schaick, SW SW Section 19-12n-100w, is running 10¾-inch casing to 1390 feet.

Rocky Mountain States Completions

NEW MEXICO

Company, Well and Location	Init. Prod. Bbls.	Depth
LEA COUNTY (Eunice Field)—		
Gypsy, State-Bell 1, c sw se Sec. 8-21s-36e	355	3929
LEA COUNTY (Hobbs Field)—		
Continental, W. D. Grimes 1, swc ne sec 28-18s-38e	¶14½-4552	4217
Shell, Nora Berry 3, c se sec 31-18s-38e	11,773	4225

MONTANA

GLACIER COUNTY (Cut Bank Field)—		
Texas Co., Fee 3, c 15-35n-6w	100	2916
Texas Co., J. B. Kerns 1, 23-35n-6w	150	2918
Par Oil Co., Haines 3, sw sw sw 2-34n-6w	70	2915
TOOLE COUNTY (Kevin Sunburst Field)—		
Lon Crumley, Shaw 3, ne se sw 35-36n-2w	70	1619
Clara Oil Co., Waite 8 c se ne 24-35n-2w	25	1514
Goelertz Oil Co., Govt. 4, ne nw nw 26-25n-3w	¶3	1735
Buskirk et al, McClure 1, (owdd) sw nw ne 4-35n-1w	*	1720
LIBERTY COUNTY—		
Western Nat. Gas Co., Schaeffer 2, c se ne 33-37n-4e	¶1	2501

WYOMING

WESTON COUNTY (Osage Field)—		
Chadron-Osage, Jones 4, cnl ne sw 13-46n-64w	¶1	1450

COLORADO

MOFFAT COUNTY (Iles Dome Field)—		
Stanolind, Parkinson 6, nw 23-4n-79w	3024	3336

*Failures; †Junked; ¶Million cu. ft. gas.

Inglewood Deep Tests Find Streaks of Oil

Los Angeles.—Plymouth Oil Company's Pollard 1, one of the two deep tests at Inglewood, is coring shale and stringers of oil sand at 5376 feet. Three oil zones were picked up from 5221 feet to bottom. More cores will be taken before a production test will be staged.

Pacific Western Oil Company's Rubel 17, the other deep test for the field, is coring ahead at 4605 feet in shale with streaks of oil sand. The last 1500 feet of hole has shown shale and oil sand, about equally divided.

Mountain View Field Given Posted Price

Los Angeles.—The new Mountain View field in Kern County is now a full fledged pool with Standard Oil Company posting a price at the well after completing a pipe line to connect up the field with its main pipe line 10 miles away.

Crude ranging from 14 to 19.9 gravity has a posted price of 57 cents and increasing to 69 cents for 25 gravity and 84 cents for 30. Top is fixed at 93 cents for 33 gravity and up.

Seventeen wells are now drilling, two of which started the past week. Four new rigs are up and Barnsdall Oil Company staked two locations in addition to well almost ready to spud. Four major companies are in the field, actively, and new independents are getting into the game as the field is further extended, making outpost acreage more attractive.

Potrero Deep Test Reaches 7545 Feet

Los Angeles.—Wilshire Annex Oil Company's deep test at Potrero has reached 7545 feet in shale and oil sand. A formation tester is to be run before further drilling is done. The hole has 3815 feet of 10¾-inch casing cemented, and if conditions justify, another string probably will be landed preparatory to a test. This is the lone well drilling in the old field, which is now producing an average of 400 barrels a day, against an estimated potential of 600 barrels.

Yorba Linda Area

Los Angeles.—Vista Oil Company's Jones 1, in the Yorba Linda area of Richfield is due to be a deep test, and has reached 6005 feet. A string of 8¼-inch casing is cemented at 4177 feet and the hole is now idle waiting for another string of casing. This is the only active test in the field.

NEW DIE-HEAD MODERNIZES OLD MACHINES

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THREADS FASTER AND CLEANER

INSTANT CHANGING TO DIFFERENT SIZES

Here's a simple, inexpensive way to get new machine efficiency from your present pipe threading equipment—simply by installing a Williams "Rapiduction" Die-Head. One head will thread the entire range of your machine. A quick, simple adjustment changes it to any size—*without* changing heads or die holders. Think of the time and labor you can save—and note the big reduction in die expense.

A Special Taper Attachment can be furnished with the head, to cut perfectly tapered threads of any length, for oil field work.

Cut your operating costs to rock bottom. Send for complete details now.

A complete line of modern pipe machines for all A.P.I. threads, grooving pipe and making up work.

Stocks and Dies, Power Drive and Pipe Welding apparatus

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MONTEBELLO—		
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Pure Oil Co., Kleinhan 4, Porter twp, se sw ne sec 20	25	3438
Sun Oil Co., Vallendar 1, Lincoln twp, sw ne sec 11	*	1394
ISABELLA COUNTY—		
Tri Oil Co., Slentz 3, Vernon twp, ne ne se sec 22	60	3780
Morris-Van Keuren, Bowman 2, Vernon twp, se ne nw sec 27	*	3788
McClanahan Oil Co., Demski, Jr., 1, Denver twp, sw sw nw sec 27	*	1700
D. F. Jones, Swan 1, Broomfield twp, sw sw se sec 1	*	1324
MECOSTA COUNTY—		
Taggart Bros., McKeough 7, Austin twp, sw sec 7	*	1332

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WASHINGTON COUNTY—		
Philadelphia Oil Co., Hulda Jenkins 1	40	2995
Raymond Orrill & Co., G. L. Walker 4	*	2974
Carnegie Natural Gas, N. B. Redd 1	¶	1783
GREEN COUNTY—		
Local Oil Co., Rainey 1	¶	....

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CALHOUN COUNTY—		
Hope Construction Co., Mary A. Stump 4	15	2110
Starcher & Richards, James Wilson 1	¶	2154
CABELL COUNTY—		
Ora Ann Gas Co., G. H. Midkiff 1	*	1562
CLAY COUNTY—		
Godfrey L. Cabot, Inc., Hill-Long 9	¶	2651
BOONE COUNTY—		
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McCall & Co., E. C. Rohrbough 1	¶	....
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KANAWHA COUNTY—		
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RITCHIE COUNTY—		
G. A. Smith & Co., F. M. Wince 1	25	....
Hardman & Co., Hardman & Co. 1	¶	1980
ROANE COUNTY—		
Sand Run Oil & Gas, Josephine Young 1	40	....
Frank Finley & Co., W. Hunter Smith 1	10	....
TYLER COUNTY—		
Ohio Oil & Gas Co., Rebecca Ash 1	*	1742
WETZEL COUNTY—		
State Line Oil & Gas, G. W. Kirkhart 1	1	3295
Ray Hennen & Co., Jesse Parrish 1	*	2907
WOOD COUNTY—		
John Leaton & Co., John Coplin 5	2	1811

SOUTHEASTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
MONROE COUNTY—		
Nix Oil Co., Mary C. Fisher 6	¶	1650
Mary Lynn & Co., P. W. Edington 2	10	1656
NOBLE COUNTY—		
Elmer Thernly, Leonard Cain 2	2	1580

CENTRAL OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
ASHLAND COUNTY—		
Ohio Fuel Gas Co., G. H. Fulmer 1	¶	2903
ATHENS COUNTY—		
Ohio Fuel Gas Co., Irene Douglas 1	¶	1667
FAIRFIELD COUNTY—		
City Natural Gas Works, J. J. Shaw 3	*	2223
GUERNSEY COUNTY—		
Ohio Fuel Gas Co., D. S. Nesbit 1	¶	1466
KNOX COUNTY—		
Upham Gas Co., Cecil Strickler 1	¶	3146
LORAIN COUNTY—		
Ohio Fuel Gas Co., J. C. Offenberg 1	¶	....
Wiser Oil Co., E. T. Squire 1	*	2260
LICKING COUNTY—		
Armbruster & Strickler, Paul Miller 1	¶	582
Whitehill Oil Co., Alice Ashcraft 20	45	2851
MEIGS COUNTY—		
Barton & Utsinger, Elmer J. Searles 1	¶	913
MEDINA COUNTY—		
Preston Oil Co., Harry M. Beach 19	*	503
PERRY COUNTY—		
Ohio Fuel Gas Co., Blanch Shough 1	¶	913

NORTHWESTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
HARDIN COUNTY—		
Ohio Fuel Gas Co., E. V. Jones 1	*	....

KENTUCKY

Company, Well and Location	Init. Prod. Bbls.	Depth
ALLEN COUNTY—		
Ben Ruble, G. A. Welch 1	*	576
BARREN COUNTY—		
Unknown Parties, John Boyd 1	5	370
DAVIESS COUNTY—		
Hupp & Duff, E. L. Hinton 1	20	....
HANCOCK COUNTY—		
Joseph B. Mayer, J. W. Matthews 2	40	....
McLEAN COUNTY—		
W. W. Dameron & Co., L. E. Morris 12	80	....
L. E. Morris 13	140	....
Cameron, Thompson & Co., Will Ashton 3	30	....
OHIO COUNTY—		
Snowden-McSweeney Co., G. E. Fuqua 1	122	....
Stewart & Co., G. W. Roberts 2	214	....
Miles & Co., Ben Canary 1	8	....

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KANAWHA COUNTY—		
Godfrey L. Cabot, Inc., A. D. Huntington 43	¶	2110
RITCHIE COUNTY—		
G. A. Smith & Co., F. M. Wince 1	25	....
Hardman & Co., Hardman & Co. 1	¶	1980
ROANE COUNTY—		
Sand Run Oil & Gas, Josephine Young 1	40	....
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TYLER COUNTY—		
Ohio Oil & Gas Co., Rebecca Ash 1	*	1742
WETZEL COUNTY—		
State Line Oil & Gas, G. W. Kirkhart 1	1	3295
Ray Hennen & Co., Jesse Parrish 1	*	2907
WOOD COUNTY—		
John Leaton & Co., John Coplin 5	2	1811

SOUTHEASTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
MONROE COUNTY—		
Nix Oil Co., Mary C. Fisher 6	¶	1650
Mary Lynn & Co., P. W. Edington 2	10	1656
NOBLE COUNTY—		
Elmer Thernly, Leonard Cain 2	2	1580

CENTRAL OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
ASHLAND COUNTY—		
Ohio Fuel Gas Co., G. H. Fulmer 1	¶	2903
ATHENS COUNTY—		
Ohio Fuel Gas Co., Irene Douglas 1	¶	1667
FAIRFIELD COUNTY—		
City Natural Gas Works, J. J. Shaw 3	*	2223
GUERNSEY COUNTY—		
Ohio Fuel Gas Co., D. S. Nesbit 1	¶	1466
KNOX COUNTY—		
Upham Gas Co., Cecil Strickler 1	¶	3146
LORAIN COUNTY—		
Ohio Fuel Gas Co., J. C. Offenberg 1	¶	....
Wiser Oil Co., E. T. Squire 1	*	2260
LICKING COUNTY—		
Armbruster & Strickler, Paul Miller 1	¶	582
Whitehill Oil Co., Alice Ashcraft 20	45	2851
MEIGS COUNTY—		
Barton & Utsinger, Elmer J. Searles 1	¶	913
MEDINA COUNTY—		
Preston Oil Co., Harry M. Beach 19	*	503
PERRY COUNTY—		
Ohio Fuel Gas Co., Blanch Shough 1	¶	913

NORTHWESTERN OHIO

Company, Well and Location	Init. Prod. Bbls.	Depth
HARDIN COUNTY—		
Ohio Fuel Gas Co., E. V. Jones 1	*	....

KENTUCKY

Company, Well and Location	Init. Prod. Bbls.	Depth
ALLEN COUNTY—		
Ben Ruble, G. A. Welch 1	*	576
BARREN COUNTY—		
Unknown Parties, John Boyd 1	5	370
DAVIESS COUNTY—		
Hupp & Duff, E. L. Hinton 1	20	....
HANCOCK COUNTY—		
Joseph B. Mayer, J. W. Matthews 2	40	....
McLEAN COUNTY—		
W. W. Dameron & Co., L. E. Morris 12	80	....
L. E. Morris 13	140	....
Cameron, Thompson & Co., Will Ashton 3	30	....
OHIO COUNTY—		
Snowden-McSweeney Co., G. E. Fuqua 1	122	....
Stewart & Co., G. W. Roberts 2	214	....
Miles & Co., Ben Canary 1	8	....

*Failures; †Junked; ¶Million cu. ft. gas.

Drilling Reports on Important Wildcats

EAST TEXAS

ANDERSON COUNTY—H. L. Hunt Prod. Co. et al's A. L. Temple-C. A. Miller 1, S. Sanchez sur No. 2-10, Long Lake area, rig. Canadian Production Co.'s Mrs. R. M. Jackson-Amerada 1 (387-ac), Manuel Rionda sur, sp & sd. J. A. Johnson et al's Mrs. M. B. Huffman 1 (170-ac), R. S. Patton sur, rig. Sun Oil Co.'s Robt. N. Erskine 1 (5203-ac), Sam C. Box sur, Navarro Crossing, elev 202 ft, sd repairs 3590 ft.

CASS COUNTY—John R. Hadley et al's Ray Bryan 1 (80-ac), Al. Latimer sur, elev 343 ft, Pecan chalk 2316-2638 ft, sd 2960 ft. Remley-Nelley & R. Kamon Group No. 1's Mrs. I. O. Savage 1 (121-ac), Mary Patterson sur, elev 351 ft, Pecan chalk 2030-2488 ft, sd 4016 ft. United Production Corp.'s T. J. Walton 1, J. Coleman sur, Pecan chalk 2079-2421 ft, top anhydrite 4921 ft, dr 5095 ft. H. F. Wilcox et al's S. A. Orr 1 (316-ac), G. W. Morris sur, elev 381 ft, sd 3887 ft.

CHEROKEE COUNTY—Walter L. Goldston et al's Southern Pine Lumber Co. 1 (80-ac), N. Newton sur, lcn. H. L. Hunt Prod. Co.'s T. R. Black 1 (50-ac), D. W. McNabb sur, lcn. K. Hughes-Ed. Zilkey & McCullough's Jess Bradford 1 (50-ac), J. Armendaris sur, sd 3780 ft. T. J. Wood et al's New Birmingham 2 (161-ac), Levi Jordan sur, rig; New Birmingham 3, lcn. Jacksonville O&G Co.'s H. D. Henderson 1 (40-ac), J. Pineda sur, rog. South Gulf Oil Corp.'s Joe Bailey-Hagelstine 1 (80-ac), L. Rhodes sur A-724, elev 386 ft, sp & sd.

FRANKLIN COUNTY—Humble O&R Co.-Ed. B. Hopkins-Ed. DeGolyer et al's S. David-M. & P. Bank 1 (200-ac), John Askey sur, elev 365 ft, Pecan chalk 1225-1325 ft, dr 1400 ft.

FREESTONE COUNTY—Clyde W. Creighton et al's W. A. Holley 1 (80-ac), A. B. & M. sur, elev 399 ft, sd 5675 ft. Walter M. Burress et al's J. B. H. Orand 1 (50-ac), W. M. C. Jones sur, 1¾ mi n Fairfield, lcn. American-Liberty Oil Co. et al's Trinity Farm Securities Co. 1 (80-ac), elev 251 ft, dr 815 ft. Walter L. Goldston et al's E. M. & C. H. Watson 1, R. D. Price sur, lcn. Hunter-Rowe Trinity Farm Securities Co.'s Trinity Farm 1 (80-ac), R. M. Williamson sur, sw of Cayuga, woc 540 ft. J. E. Milburn & J. B. Patty's S. E. McAshan 1 (40-ac), S. G. Diaz sur, blk 178, sp & sd. Trinity State Oil Co.'s Trinity River 1, sw of Cayuga, lcn.

HENDERSON COUNTY—Great State Oil Corp's (Dick Andrade, III) R. Sid Ansley 1, N. B. Thompson sur, sp & sd. Crosby & Pulp's M. T. Dodd 1, Geo. Aldrich sur, 4 mi e Malakoff, lcn.

HOPKINS COUNTY—D. A. Hale et al's L. M. Hall 1 (70-ac), A. Caro sur A-143, rig.

HOUSTON COUNTY—Boone et al's Trinity State Bank 1 (142-ac), Chas. McEllis sur, rog.

HUNT COUNTY—G. S. & S. Oil Co.'s Oscar Popper 1, Jas. Moore sur No. 544, dr 925 ft. L. G. Priest's (was J. H. Wagoner O&G Co.) J. R. Love 1 (95-ac), J. Grilisky sur, elev 558 ft, aban in lower Woodbine sand 3666 ft. L. G. Priest & Co.'s Barnett 1 (212-ac), J. C. Hamer sur A-417, rog. H. O. Shawver et al's J. H. Jones 1 (99-ac), Lydia Ferguson sur, sd to abn 3104 ft.

LAMAR COUNTY—Cole-Waggoner et al's W. B. Martin 1 (132-ac), J. Deck sur, sd 2500 ft.

LEON COUNTY—Killough & Tucker et al's G. B. Young 1 (100-ac), Jas. M. Boone sur, rig.

LIMESTONE COUNTY—J. E. Schultz et al's R. Ward 1 (23-ac), H. York sur, sp & sd.

MORRIS COUNTY—H. N. H. Drl. Co.'s E. Hall 1 (177-ac), Levi Jordan sur, top Pecan chalk 2360 ft, cor 3695 ft. C. L. Simpson et al's P. M. Staggers 1, J. D. Nelson sur, Pecan chalk 2520-2955 ft, dr 3060 ft.

NAVARRO COUNTY—Bennett Bros. et al's T. E. Stewart 1 (83-ac), W. R. Bowen sur, dr 680 ft. L. N. McCulloch et al's C. D. & J. L. Berry 1 (35-ac), W. W. Moss sur, sd 625 ft. R. L. Wheelock-J. L. Collins-Magnolia & Humble's I. N. Cerf 1 (147-ac), Jas. Smith sur, Trinity sand test on w edge Corsicana-Powell field, elev 435 ft, Austin chalk 2860-3372 ft, top Woodbine sand 3827 ft, top Georgetown lime 4330 ft, dr 4500 ft.

PANOLA COUNTY—R. H. Davis' Wooten Est. 1, Winny Mann sur, dr 1480 ft. Givens & Holloway's Wooten Est. 1, Winny Mann sur, dr 980 ft.

RAINS COUNTY—J. K. Wadley & J. W. Halsell's T. F. Jones 1 (22-ac), B.B.B.&C. sur, elev 425 ft, Pecan chalk 2503-2700 ft, top Austin chalk 3970 ft, dr 4500 ft.

RED RIVER COUNTY—Speary & Cornell's E. H. Thompson 1 (38-ac), J. Northcross sur, lcn.

RUSK COUNTY—Geo. F. Hudson et al's J. H. Phillips 1-A, N. Villareal sur, top Pecan chalk 2412 ft, cem 5 3/16-in csg 3600 ft, co 3628 ft. G. A. Hathaway et al's Gray 1, Jas. McLain sur, elev 315 ft, top Georgetown lime 3140 ft, sd 4460 ft. Stewart & Egan's Hall Wood 1 (847-ac), blk 12, Jose I. Sanchez sur, lcn.

SMITH COUNTY—Cochran & Williams' Mrs. J. M. Dean 1 (100-ac), B. Moore sur, lcn. B. F. Phillips et al's Gibbons Mfg. Co. 1, J. M. Garcia sur, elev 304 ft, sd 3830 ft. D. E. Stimson & Preston Rose's E. Wiggins 1 (48-ac), F. H. K. Day sur, elev 479 ft, Pecan chalk 3040-3420 ft, sd 4528 ft.

UPSHUR COUNTY—G. H. O. Oil Co.'s J. M. Floyd 1 (177-ac), Robt. Raiford sur, sd 2760 ft. Lanier & Moore's Mrs. M. Vaughn 2, P. B. Standifer sur, sd 1042 ft.

VAN ZANDT COUNTY—B. F. Blackman et al's C. E. Dorrill 1 (35-ac), C. E. Rivers sur, sd 1340 ft. E. B. Evans et al's Mrs. J. P. Palmer 1 (140-ac), N.C.S.L. sur, lcn. H. L. Edwards' (was C. A. Gilliam, Virgil Whitworth & Arthur Allen) A. T. Bass 1 (16-ac), Wm. Hart sur, elev 480 ft, top Woodbine section 4210 ft, fsh 4267 ft. J. C. Allen et al's E. B. Evans 1 (69-ac), N.C.S.L. sur, lcn. Martin & Evans' L. M. Palmer 1 (69-ac), blk 13, N.C.S.L. sur, dr 880 ft. Meyer & Rauch's P. E. Neil 1 (47-ac), N.C.S.L. sur, lcn. S. E. Miller et al's J. M. Palmer 1 (39.1-ac), N.C.S.L. sur, blk 14, sd 225 ft. Peden-Olson Oil Co.'s W. S. Brannon 3 (45-ac), testing Nacatoch sand 1161-69 ft; Palmer 1, sd 1270 ft. Skinner et al's D. F. Cade 1 (28-ac), N.C.S.L. sur, co 1265 ft. Van Zandt Synd's Dr. C. S. Coker 1 (60-ac), Wm. Daniel sur, sd 1208 ft. John D. Wrather et al's G. W. Carter 2 (160-ac), Wm. Daniel sur, dr 2810 ft.

WOOD COUNTY—Alex M. Snyder et al's J. T. Holmes 1 (122-ac), A. N. McKnight sur A-399, top Pecan chalk 3400 ft, as 3615 ft.

ABBREVIATIONS

The following abbreviations, signs, etc., are used in completion and wildcat reports in THE OIL WEEKLY.

* —*dry hole, abandoned well.*	owdd —*old well drilling deeper.*
‡ —*salt water (completions).*	owpb —*old well plugging back.*
† —*junked and abandoned.*	pb —*plugged back or plugging back.*
¶ —*million feet of gas.*	r —*reaming.*
abd —*abandoned.*	rog —*rig on the ground.*
bbls —*barrels.*	rur —*rigging up rotary tools.*
br —*building rig.*	rust —*rigging up standard tools.*
b.s. —*basic sediment.*	sd —*shut down.*
csg —*casing.*	sdtr —*sidetracking.*
co —*cleaning out.*	sg —*show gas.*
dd —*drilling deeper.*	si —*shut in*
dk —*derrick.*	so —*show oil.*
dr —*drilling.*	so & g —*show oil and gas.*
fsg —*fishing.*	spd —*spudding.*
ft —*feet.*	sr —*straight reaming.*
hfw —*hole full of water.*	sw —*salt water.*
in —*inches.*	td —*total depth.*
lcn —*location.*	ur —*underreaming.*
m —*milling.*	wih —*water in the hole.*
mim —*moving in materials.*	wo —*workover.*
mit —*moving in tools.*	wocs —*waiting on cement to set.*
mot —*milling on tools.*	wosr —*waiting on standard rig.*
n, s, e, w, —*north, south, east, west.*	
oih —*oil in hole.*	

WEST TEXAS

ANDREWS COUNTY—Honolulu Oil Co.-Llano Oil Co.'s J. E. Parker 1, Sec. 7, Blk. A-44, dr with hfw 1310 ft. Humble O&R Co.'s R. M. Means 1, Sec. 2, Blk A-35, elev 3166 ft, top anhydrite 1865 ft, top Yates sand 2840 ft, top brown lime 3845 ft, top white lime 3935 ft, cored lime with porosity 4125-4140 ft; B. S. Walker 1, Sec. 6, Blk. A-43, dk.

BORDEN COUNTY—Continental Oil Co.'s Clayton-Johnston 1, Sec. 34, Blk. 32, T-4-N, woc 8⅝-in cas 1550 ft.

BREWSTER COUNTY—C. M. "Dad" Joiner et al's W. J. McEntire 1, dr 1755 ft.

COKE COUNTY—W. Monroe Hooper et al's S. W. Gaston 1, ur 2560 ft.

CRANE COUNTY — Cordova Union Oil Corp.-Jax Cowden's Cowden 1, Sec. 13, Blk. "X", elev 2524 ft, salt 1140-1770 ft, so and dr 2990 ft. Gulf Prod. Co.'s E. N. Snodgrass 1, Sec. 1, Blk B-25, Waddell area, dr 1030 ft.

CROCKETT COUNTY — Eppenauer Drlg. Co.'s J. W. Owens 1, Sec. 12, Blk "GG", T&NO Ry. sur, set 12½-in cas 240 ft.

CULBERSON COUNTY — Anderson-Prichard Oil Corp.'s M. W. Borders 1, Sec. 34, Blk. 69, dr 125 ft.

DAWSON COUNTY—Ray A. Albaugh et al's John Robinson 1, sd 1375 ft.

ECTOR COUNTY—C. J. "Red" Davidson et al's H. E. Cummins-Empire 1, Sec. 10, Blk. 45, T-1-N, elev 3294 ft, completed 62 bbls oil and 10,000,000 ft gas after shot, td 4509 ft. O. C. Harper & R. L. York's W. F. Bates 1, so in lime 3975-4004 ft and 4018 ft, dr lime 4380 ft. Landreth Prod. Corp. et al's Clarence Scharbauer 1, elev 3162 ft, top salt 1465 ft; Yates sand 2652-62 ft; top lime 3710 ft, sd to cure titles, td 3765 ft.

FISHER COUNTY—E. T. Campbell et al's W. R. Bishop 1, rog. Merry Bros. & Perini, Inc.'s R. L. Dean 1 (160-ac) Sec. 2, Blk "R", W. E. Richardson sur, rig.

GLASSCOCK COUNTY—Steve C. Currie-Wahlenmaier Pet. Corp. et al's Joe Calverly-Underwood 1, Sec. 24, Blk. 36, T&P Ry. Sur, set cas 995 ft. John I. Moore Pet. Corp.-Loffland Bros. et al's L. S. McDowell 1, Sec. 22, Blk. 34, T-2-S, Ordovicion test, elev 2534 ft, top lime 2137 ft, dr lime 3235 ft. Moore Bros. et al's Oliver Daniel-Gulf 1, Sec. 16, Blk. 34, T-5-S, rig.

TOM GREEN COUNTY—Southwestern Exploration Co.'s J. W. Bennett 1, elev 1792 ft, dr 2675 ft. W. A. Sudderth et al (was Hancock-Reed-Adkins') Bennett Reed 1, co to dd, 508 ft.

HOWARD COUNTY—Southern Oil Corp.'s J. T. Frazier 1, fsh 3420 ft.

IRION COUNTY—Melrose Oil Co.'s J. D. Sugg 1, sp and sd. J. P. Williams & D. M. Short's D. S. Gentry 1, sd 1400 ft.

JONES COUNTY—Campbell & Elzie's J. N. Herndon 1, Sec. 19, S. P. Ry. sur, lcn.

MENARD COUNTY—Jas. L. Duffy et al's W. J. Wilkinson 1, sp and sd.

PECOS COUNTY—Tex-Mex Pet. Corp.'s G. W. Wallings 1, sd 1565 ft. Trans-Texas Oil Co.'s C. M. Caldwell 1, sd 600 ft.

PRESIDIO COUNTY—Luderman Bros. Oil Corp.'s R. I. Bledsoe 1, Sec. 15, Blk. 351, GC&SF Ry. sur, co to dd fr 507 ft.

REAGAN COUNTY—E. P. Kirschner et al's W. H. White-McIntosh 1, top lime 2809 ft, sd 3165 ft. Skelly Oil Co. et al's University 1-D, Sec. 33, Blk. 8, Ordovician lime test, rig. J. P. Williams et al's J. R. Scott-Atlantic 1, Sec. 179, Blk. 1, elev 2587 ft, top salt 1150 ft, sd 2663 ft.

REEVES COUNTY—Hugo Freels Oil Co.'s I. B. Greenman 1, sd 3985 ft. J. E. Cunningham et al's J. G. & E. Tiller 1, Sec. 1, R. P. Altman sur, sp and sd. Grisham-Hunter Corp.'s Fee 1-A, fsh 2400 ft.

RUNNELS COUNTY—Daniels et al's W. F. James 1, sd 1225 ft. Melrose Oil Co.'s Mrs. L. P. Wood 1, sd 1430 ft. W. D. Sawyer et al's H. Giesecke-Russell 1, sd 2033 ft. F. D. Williamson et al's J. L. Elkins 1, sd 1410 ft.

SCHLEICHER COUNTY—J. M. Cooper et al's Bert Page 1, Sec. 40, Blk. "L", GH&SA Ry. sur, Ordovician test, elev 2270 ft, first gas at 5337 ft, sd for cas in sw sand, td 5635 ft. Humble O&R Co.'s Ike Honig 1, Sec. 38, Blk. "M", GH&SA Ry. sur, Ordovician lime test, sp and sd.

SCURRY COUNTY—H. H. Coffield & W. S. Guthrie, Inc.'s, A. D. Dodson 1, Sec. 177, Blk. 97, H&TC Ry. sur, sd 1485 ft. Paul C. Teas et al's B. H. Chapman 1, top salt 675 ft, dr 1330 ft.

STONEWALL COUNTY—Merry Bros. & Perini, Inc.-Humble's C. L. Williams 1, Sec. 6, Blk. "C", AB&C sur, woc 900 ft.

SUTTON COUNTY—Paul C. Teas et al's C. E. Mower 1, Sec. 39, Blk. 5, TW&NG Ry. sur, lcn.

TAYLOR COUNTY—H. Crissman et al's Abilene Fee 1, sd 505 ft. N. E. Davenport et al's R. H. Anderson 1, jkd, 2003 ft, skid dk.

UPTON COUNTY—Broderick & Calvert, Inc.'s, Homer (La.) Nat'l Bank 1, Sec. 22, Blk. 42, T-4-S, dr 615 ft. Gulf Prod. Co.'s J. T. McElroy 103, Sec. 197, Blk. "F", Ordovician test, elev 2625 ft, top lime 2620 ft, top Ordovician lime section 10,167 ft, cored o&g saturated lime 10,564-10,630 ft, sd for 7⅝-inch cas.

WARD COUNTY—H. R. Randall-L. G. Bradstreet & Bert Fields' L. W. Sheppard-Monroe 1, Sec. 77, Blk. 34, H&TC Ry. sur, top salt 1620 ft, elev 2604 ft, fsh dp 2375 ft.

WINKLER COUNTY—D. C. Evans et al (was Liner Drlg. Co.-Wilson et al's) Seth Campbell 1, Sec. 2, Blk B-5, PSL sur, elev 2884 ft, td 4639 ft. R. S. Matthews et al's Evans 1, Sec. 46, Blk. 73, PSL sur, sp and sd.

SOUTH TEXAS

BANDERA COUNTY—A. P. Crane & Co.'s Watson 1, sd 1471 ft, black shale. Peerless Oil & Gas Co.'s R. C. Garrison 1, Sec. 506, GC&SF survey, dr 725 ft.

BASTROP COUNTY—Marts & Beavans' A. Reyes 10, Addison Litton sur, dr 1750 ft. Joe Mills et al's Lytton 1, 1040 ft sel and 1005 ft swl lease Navarro sur, ½ mi n Cedar Creek field, show oil in soft serpentine 1627-39 ft, set csg, dr in; looks like producer. Ogden & Reed's C. L. Riddle 6, Joshua Gray sur, td 2296 ft lime 2286-96 ft, saturated, top chalk 2296 ft, 5 3/16-inch cas 2154 ft, dr out plugs.

BEE COUNTY—Falvey et al's Gardner 1, F. Lewis sur, dr 2100 ft. R. H. Feltner's Albert Theis 1, Castano Revis sur, dr 3050 ft. Houston Oil Co.'s Niehaus 3-B, nw cor 100 ac tr, BS&F Sur. No. 1, dr 1520 ft. Howeth & Swiger's Marie Schramm Estate 1, H. O'Brien 1, dr 3870 ft. Edwin M. Jones' Robinson 1, Sec. 5, Ragley sub, J. M. Uranga sur, dk, prep to ru. Phillips Pet. Co.'s T. P. Morgan 1, H. E. Eyles sur, circulating 6519 ft. Taylor-Falvey's Baptist Church 1, F. Lewis sur, dk. R. J. Worthington et al's Rutledge 1, B. Q. Hadley sur, sp and sd.

BEXAR COUNTY — Briggs & McPhee's Florence Lamb 1, Manuel de Luna sur, sd 800 ft for repairs; Randolph Carter 1, M. de Luna sur, ru and sd. Boles et al's Dillon 1, M. de Luna sur, ds stuck 1082 ft. F. T. Chew's Ogden & Brooks 1, Mission Irrigation Farms 1, lcn. Rollin V. Hill, Jr.'s, Boeck 1, Shepherd Sur No. 1, sd 400 ft. F. & H. Oil Co.'s G. H. Hendrickson 1, County Block 4191, sd 1050 ft. W. H. Kennon's Fee 5, F. Rodriguez sur, completing 335 ft. F. W. Noble's R. D. DeVilbliss 1, Martinez sur, dr below sur cas. H. A. Pagenkopf's Estate of Maria Schultze 1, Juan Montez sur, dr 650 ft. C. A. Smith's H. J. Lamb 1, Jose de la Garza sur, td 982 ft, so&g, sd. Swearingen & White's Halbardier 17, Sec. 57, moving on. Texas Pet. Co.'s E. B. Carruth 1, F. Rolen sur, setting csg, td 825 ft. Weilbacher et al's Ernst 2, John Christopher sur, dr 800 ft.

BROOKS COUNTY—Mrs. Florence East's G. Madarigal 1, R. Garcia Salinas Grant, Share B, dr below 500 ft.

CALDWELL COUNTY—S. S. Cargill's W. Damerau 2, D. Cooper sur, td 2277 ft, top Edwards lime 2275 ft, 6⅝-in cas set 2210 ft, corrected depths, co to core deeper. Monte Vista Oil Corp.'s W. I. Pope 1, McCarley sur, sp. M. C. Moore's Lackey 1, S. Damon sur, sd 1120 ft. Wagener, Stieren & Daniels' S. M. Blackwell 1, John Roe sur, td 2344 ft, top Edwards lime 2340 ft, elev 415 ft, ream to make dst.

CALHOUN COUNTY—Continental's American National Realty Co. 1, center ne sec 6, Blk C, r 5754 ft. J. H. Meek's R. Adam 1, V. Garcia sur, lcn. Southwest Oil Corp.'s E. H. Welder 1-B, Day Land & Cattle Co. Sur No. 228 A, dr 6015 ft, top Discorbis 4308 ft, top Heterostegina 4651 ft; top Frio 4815 ft; E. H. Welder 1-C (3) making lcn.

DE WITT COUNTY — Keystone Royalty Co.'s L. T. Burns 1, Nicholas McNutt sur, temp sd 3600 ft.

DUVAL COUNTY — Bridwell Oil Co.'s Schoolfield & O'Byrne 1, Blk 13, Sec. 78, lcn. Chiquita Oil Co.'s Richardson 2, Blk 3, Sec. 3, sd 1785 ft. Continental Oil Co.'s R. Driscoll Estate 2-A, Sec. 448, snd 3518-25 ft, making dst. Tom Graham and Texon Royalty Co.'s G. B. Parr 1, J. Poitevent Sur No. 185, dr 3600 ft. Frank Gravis et al's Hubbard 1, Sec. 83, dr 750 ft. Grimes et al's M. Serna 1, Sec. 286, 330 ft nl and wl of Sec., ru. Harrison Oil Co.'s Serna 2, Sec. 523, dk. W. W. Holland's Wood-Welder 1, Sec. 211, J. Poitevent sur, lcn. Lewis & Beer's W. R. Peters 1, Blk 18, Sec. 27, dr 1900 ft. Magnolia Pet. Co.'s Duval County Ranch Co. 1, Sec. 58, dr 4100 ft. W. C. McBride, Inc.'s, E. R. Hagist 1, s se Sec. 1, coring 1325 ft. O'Byrne & Jennings' J. Benavides 1, Blk 6, Sec. 355, dr 1000 ft. Sun Oil Co.'s Moreno 1, Sec. 540, dr 5770 ft, top Jackson 4940 ft.

EDWARDS COUNTY — Will Ohlhausen's Turney 1-A, 8 ft n No. 1, CCSD&RGNG sur, Blk MW, Sec. 176, skid on. H. H. Sides' Turney 1, CCSD&RGNG Sur, Sec. 164, sd for cas, 538 ft.

FRIO COUNTY — Amerada Pet. Corp.'s Halff & Oppenheimer 2, J. H. Gibson sur, 6098 ft.

GILLESPIE COUNTY—Ed L. Nixon's Lindig 3, J. Guerra Sur No. 41, dr 285 ft.

GOLIAD COUNTY — Duval Oil Corp. & Fred K. Foster's Lucy Borden 1, A. Gutierrez sur, lcn, to start by Aug. 15. Diamond Half Oil Co.'s Runge Nat Bank 1, G. B. Meyers sur, td 3745 ft, test some oily mud, sd. Kemp Oil Co.'s Weldon & Mackey 1, Javiano Gomez sur, moving in rig. Oceanic Pet. Co.'s Fromme 1, P. D. Dexter sur, dk. P. H. Wilson's Lackey & Weldon 1, J. Gomez sur, lcn.

GONZALES COUNTY—H. H. Weinert et al's A. Kallies 1, Ira Nash sur, lcn.

GUADALUPE COUNTY — Diamond Half Oil Co.'s A. J. Ball 1, L. H. Peters sur, dr 1625 ft. Hollifield et al's G. W. Bailey 1, J. C. King sur, td 2193 ft, top Edwards lime 2190 ft, bailed little brackish sulphur water, sd. Texio Oil Co. and J. Elmer Thomas's Maurerman 1, Jose de la Baume Grant, sp.

HIDALGO COUNTY—Davis & Harrison's Mrs. L. George 1, Tr. 13, Por. 41, sd 3154 ft. Rogers et al's Fairbanks 1, no report. Union Sulphur Co.'s American Rio Grande Land and Irrigation Co. 2, 1 mile south No. 1, moving in rig. Woods et al's John Lawrence 1, Tr. 274, Por. 39, sd 2060 ft.

JACKSON COUNTY — Phillips Pet. Co.'s Drummond 1, Musquiz sur, dr 4730 ft; State Realty & Investment Co. 1, Vanderbilt townsite, permit granted, to spud shortly; Simon & Seidel, Musquiz sur, dr 5460 ft in sd tr hole. Turman Oil Co. et al's T. H. Miller 1, Musquiz sur, ru.

JIM HOGG COUNTY—Atkins & O'Neil's W. W. Jones 1, Share 27, Blk. 81, Holbein Sub, Hinojosa Grant, dr 3250 ft. French Oil Corp.'s Tom East 1, Blk 67-68, Leyendecker sub, No. 2 Los Moritas Grant, dr 2376 ft. Sun Oil Co.'s M. Guerra & Son 2-E, Las Cuevitas Grant, Share 14-A, ru; Martinez Estate 1, Las Animas Grant, Tract 25, ru.

JIM WELLS COUNTY — John F. Camp's B. W. Owens 1, Sec. 11, wait on rig 500 ft.

KARNES COUNTY—Harrison & Abercrombie's Schaeffer 1, A. W. Belvin sur, sd 550 ft for reparis. R. E. Cezeaux's T. Campbell 1, J. R. Backer sur, dr 200 ft. Bryce McCandless's First Natl Bank of Beeville 1, B. Q. Meyers sur, dk.

KENDALL COUNTY — Walter Bradley's W. Werner 2, J. F. Torrey sur, dr 467 ft.

KERR COUNTY — Edmiston & Walker's Whitworth 1, Sec. 1439, dr 700 ft. Lonnie Evans et al's Karger 1, J. Jose Sur. No. 2, sp. G. F. Schreiner 3, Martinez Sur. No. 1594, sd 1410 ft.

KLEBERG COUNTY—J. S. Brown et al's A. Dietz 1, Tract 7, Sec. 56, coring snd 2960 ft, last report.

LA SALLE COUNTY—Dupree Fountain's R. J. Kroschewsky 1, A. G. Starty sur, dk.

LEE COUNTY—James E. Pederson's C. A. Turner 1, David Hudson sur, dr 5250 ft.

LIVE OAK COUNTY — J. H. Durbin's Marbach 3, S. Hays sur, ru and sd. Houston Oil Co.'s Cartwright 25, Mt. Lucas area, completing 5258 ft. Lion Oil Ref. Co.'s McNeil 1, James Curry sur, dr 2910 ft. Unit Oil Co.'s A. Terrell 1, Christopher Scanlon sur, coring gas sand 840 ft.

MAVERICK COUNTY—R. R. Fagin's J. D. Beck 1, Arnold Sur. No. 50, Blk. 13, lcn. Strohman & Wright's Debonar 2, bailed little black oil 854 ft, sd. Wright & Maxwell's Little 1, Blk. 5, Sec. 64, dr 825 ft, shale.

McMULLEN COUNTY—C. C. Shumway's Shiner Ranch 7, Sec. 62, sp.

MEDINA COUNTY—Scoggins & Sanders' L. Burrell 1, M. E. Gage Sur. No. 395, dr 1375 ft.

NUECES COUNTY — Midland Oil Co.'s Noakes 1, Farias sur, dr 5050 ft. Nutex Oil Co.'s King 1, Sec. 24, sd 6021 ft. Stanolind Oil & Gas Co.'s Stratton 2, Sec. 13, Abajo Grant, dr 4250 ft. Texas Seaboard Oil Co.'s Jurica 1, Robertson sur, tract 32, prep to sp.

REAL COUNTY—M. J. Heartwell's Mrs. M. S. Perry 1, Sec. 175, AB&M sur, dr 2900 ft. Holland Oil Co.'s Peck 1, Sec. 24, E. Lopez Sur. No. 44, td 5351 ft, setting csg 5320 ft. G. Jeffreys' J. F. Power 1, Garza and Vidauri sur, rd operations 4523 ft. Neseal & Baymore's V. E. Heard 1, M. S. Ximines sur, sd 6100 ft. Quintana Pet. Co.'s T. O'Conner 2, 1400 ft sel and 466 ft nel, Blk 4, Swisher sur, dk. United Prod. Co.'s W. J. Fox et al 15, Hews & Brown sur, td 5831 ft, completing.

SAN PATRICIO COUNTY — Atkins & O'Neil and Continental Oil Co.'s E. Welder 1-A, Blk 2, Villareal sur, snd 5441-47 ft, dst 5435-47 ft, recover 5 fourbles oily mud, r for new dst; E. Welder 2, td 5377 ft, top sndy shale 5368 ft, ream for new dst. Beasley & Maxwell's Saddler 1, Sec. 32, Block 1, T. Perez sur, prep to re-dr 5056 ft. Diamond Half Oil Co.'s Ragsdale 1, George A. Paul sub 58, dr 5100 ft. Heep Oil Corp.'s R. H. Welder 1, Loupy sur, dr 2280 ft. Marland Oil Co.'s Mrs. Annie Miculastic 1, Benjamin Dale sur, prep to sp. Petrole Corp.'s Welder 1, Garza sur, dr 3870 ft. Plymouth Oil Co.'s Welder 2-A, J. & F. Portillo sur, td 5548 ft, pb to 5300 ft, ds stuck; Welder 1-B, Musquiz sur, coring 5430 ft.

STARR COUNTY—C. R. Borah et al's A. Guerra 1, San Jose Grant, sd 504 ft. R. S. Bollings, M. M. Garcia 1, Sec. 918, dr 1865 ft. Circle W. Oil Co.'s Block Bros. 1, Blk. 13, dr 1000 ft. Jim Cloud, Inc.'s J. Rodriguez 1, Share 35, Por. 88, sd 160 ft. Goodwin & Yantis' Kelsey Bass 6, Por. 86-87, Sec. 4, sd 600 ft. H. C. Harter's Sanchez et al 1, Share 72, Por. 72, dr below 300 ft. Smith-Tex Oil Co.'s Starr County Cattle Company 1, Blk 24, Por. 89, dr 2980 ft. E. L. Younkins' Kelsey Bass 19, Por. 77, dr 1102 ft.

TRAVIS COUNTY — Humble O&R Co.'s Mrs. Katherine Wells 1, James P. Kemp sur, dr 1410 ft, chalk.

UVALDE COUNTY—Humble O&R Co.'s R. L. Anderson 1, J. J. Guerra sur, fsh 2663 ft.

VAL VERDE COUNTY — Southwestern Explo. Co.'s Fawcett 1, Sec. 14, Blk. 1, GC&SF sur, ru.

VICTORIA COUNTY — American Liberty Oil Co.'s Gaugler 1, 330 ft sl and 330 ft el 268 acre tract, R. Manchola Grant, lcn; Prybil 1, R. Manchola Grant, 330 ft sl and 330 ft el 122 acre tract, ru, wait on water. Feltex Oil Co.'s H. Dietzel 1, 380 ft sl and 330 ft wl 340-acre tract, Manchola Grant, sp and sd for water. Gulf Prod. Co.'s Keeran 5, M. de Leon sur, dr 4137 ft. Humble O&R Co.'s M. V. O'Conner 15, dk; Mitchell 2, P. Benavides sur, dr 1250 ft; A. M. McFadden 1, C. O. Edwards sur, dr 3909 ft, sand. Nutex Oil Co.'s Zimmer 1, R. Manchola grant, snd 2204-9 ft, dst 300 ft oil, 225 lbs. ¼-in choke top and bottom 12

min, run csg, woc. Albert Plummer's A. Terrell 1, R. Manchola Grant, td 4437 ft, old well move on to wo. Texas Co.'s A. M. McFadden 2, C. M. B. Hoyt sur, dr 3650 ft.

WEBB COUNTY—Cole Pet. Co.'s R. Benavides 85, Callahan Home tract, coring 2500 ft. Fidelity Explo. Co.'s Saldivar 1, Sec. 657, J. V. Borrego Grant, dr 1700 ft. Gholston Drlg. Co.'s Yeager 1, Sec. 346, dr 800 ft. United Prod. Co.'s A. M. Bruni 2, Blk. 43, Sec. 8, M. Arispe Grant, snd 3395-3422 ft, dst flow 41 gravity oil in 6 minutes on ⅜ choke. C. E. Wolcott's Diana Green 1, Sec. 233, sd 300 ft.

WILLACY COUNTY—W. W. Silk's Santa Rosa 1, Lot 16, Sec. 130, sp and sd.

WILLIAMSON COUNTY—Johnson & Ray's M. D. S. Oxford 1, Williams sur, sd 349 ft.

WILSON COUNTY—Ben M. Burgess, Trustee's O. F. Burney 1, Arocha Grant, ru and sd; J. A. Darling 1, Arocha Grant, sd 680 ft.

ZAPATA COUNTY—Robert Allison's Mrs. E. T. Garza 1, 150 ft nl and 150 ft el blk 5, sec 13, lcn. Merle Gunby et al's Alice B. Haynes 1, 200 ft sel and 200 ft swl, Blk 4, A. B. Haynes sub, Comitas & Villas Grants, move in rig.

TEXAS GULF COAST

AUSTIN COUNTY — I.T.I.O. & Johnson Bro.'s August Wangler 1, Kuykendall sur abst. 243, preparing to spud.

BRAZORIA COUNTY—Amerada Pet Corp's Houston Farms Dev Co. 1, L. G. Bachelder sur, dr sticky shale 3000 ft. Gillock Pet Corp's Truksa 1, H&TC No. 7 sur, ru. Jack Clark tr's Speer 1, J. F. Pinckney sur, preparing to make drill stem test 4254 ft. Holt et al's Griffith 1, J. B. Bailey sur, sd 4173 ft. W. H. McCarthy's Nalt Life Ins. Co. 1, H. Austin No. 4, A-12, sur, ru and sd.

BRAZOS COUNTY — M. E. Wallace's Broach 1, W. Singleton sur, sd 368 ft.

CHAMBERS COUNTY—Turnbull & Irwin's Sudindrof 1, H&TC No. 7 sur, set surface csg 1150 ft.

FT. BEND COUNTY—Gem Oil Co's Farmer 1, Robt Hodge sur, dr shale 4000 ft. W. H. Scheper Bartosh 1, H&TC No. 52 sur, lcn. Vico Oil Co's Darst 1, E. Powell sur, sd. Wilkes et al's Norris 1, Geo. Teel sur, lcn.

GALVESTON COUNTY — C&RG Drilling Co's Spoor 1, W. K. Wilson sur, sd 6577 ft. Humble O&R Co's Stewart 1, J. Sellers sur, dr shale 6058 ft.

GRIMES COUNTY—Marshall et al's Dodd 1, Timothy Jones sur, sd 56 ft. W. D. Roan et al's Kelly 1, U. Sanders sur, lcn. J. Woodward's Hamilton 1, O. Hill sur, dr gumbo 360 ft.

HARDIN COUNTY — Wilcox Oil & Gas Co's Sternberg 1, G. Dorsey sur, dr shale 5182 ft. Alpha Pet Corp's Steinberger 1, H. Williams sur, waiting on packer, td 7018 ft.

HARRIS COUNTY—General Crude Oil Co's Rorick est 1, J. C. Ogburn sur, dr shale 3080 ft. Imperaor Oil Co's Brooks 1, Vince sur, lcn. Loring Oil & Gas Co's Westmoreland 1, J. M. Swisher sur, abnd 6031 ft. Southland Oil Co's Galney 1, H&TC blk 1, sec 4, sur, dr shale 2500 ft.

JEFFERSON COUNTY—Sun Oil Co's Long 1, John Blair sur, reaming 6762 ft.

LIBERTY COUNTY—Gulf Prod Co's Kirby C-5, J. Pleasant sur, 933 ft w and 550 ft s of No. 4-C, lcn. Liberty Ind Oil Co's Neel 1, S. Strong sur, dr shale 2001 ft.

MONTGOMERY COUNTY—Humble Oil & Refining Company's Anna M. Platte 1, W. Barker sur, dr shale 2700 ft. Shell Petroleum Corporation's Creighton 1, J. Pevehouse sur, lcn.

GULF COAST MAP

Copies of the map included in issue of July 16 are available at $1.00 a copy.

Larger prints in one color and taken from the original tracing, size 42" x 98" are available ON CLOTH $12.50 ON PAPER $5.00

***Address* THE OIL WEEKLY**

3301 Buffalo Drive, Houston, Texas

LOUISIANA GULF COAST

ACADIA PARISH—Standard Oil Company of Kansas' J. Nouton 1, sec 34-8s-3e, sd 1400 ft. Woodley Pet. Co.'s Daigle 1, sec 24-7s-1e, dr shale 6318 ft.

BEAUREGARD PARISH — Federal Pet. Co.'s Lutcher Moore 1, sec 4-7s-12w, dr shale 8016 ft; same operator's B-1, sec 26-6s-13w, rigging up. E. W. Martin's Cochran 1, sec 34-4n-12w, abd in shale 6256 ft.

CALCASIEU PARISH — Union Sulphur Co.'s Barbee Est. 2, sec 11-9s-8w, dr shale 6450 ft.

CAMERON PARISH—The Texas Co.'s Calcasieu Lake 1, sec 1-14s-9w, dr shale 6366 ft.

IBERIA PARISH—Grosse Tete Dev. Co.'s Augelloz 1, sec 54-12s-7e, wocs 2270 ft.

JEFFERSON DAVIS PARISH—Humble O&R Co.'s Devilbiss 3, sec 14-9s-4w, dr shale 5995 ft. Same company's Kratzer 1, sec 11-9s-4w, dr shale 1690 ft. Shell Pet. Corp.'s R. C. Jarigan 1, sec 12-9s-4w, dr shale and lime 6772 ft. Tide Water Oil Co.'s Bourgeois 1, sec 28-9s-5w, dr shale 5810 ft.

LA FOURCHE PARISH—Barnsdall Oil Co.'s Herang Plantation 2, La Rose prospect, sec 5-17s-20e, abd in shale 7216 ft; same operator's Herang Plantation 3, 1175 ft e, 1050 ft n of sw c of sec 5-17s-20e, lcn. Ben Coyle La Fourche Ld Co.'s 1, sec 32-18s-22e, abd 4900 ft.

PLAQUEMINES PARISH—E. A. Howe's Buras Levee 1, sec 26-21s-30e, sd 1058 ft.

RAPIDES PARISH—J. L. Beck's Hexon & Simmons 1, 33 ft s and e of nw c of sec 40-4s-1e, abd 2130 ft.

ST. MARTIN PARISH—The Texas Co.'s St. Martin Ld. Co. 1, sec 17-8s-7e, dr shale 7521 ft.

ST. MARYS PARISH — Edwards Drilling Co.'s Chetemaches 1, sec 34-13s-9e, completing dk, td 6501 ft.

VERMILION PARISH — J. C. & Lon Moore's Breussard 1, sec 32-11s-3e, dr gumbo 400 ft.

VERNON PARISH—Anderson & Kerr Drilling Co.'s Nona Mills 1, sec 25-2n-9w, sd 4094 ft.

NORTH LOUISIANA

BIENVILLE PARISH—Saline Drilling Co.'s Pardee 1, ne ne 27-14n-6w, rur, elev 162.4 ft.

BOSSIER PARISH—F. M. Crow et al's Biedenharn 1, se se 23-21n-14w, sd 1045 ft. Howard & Bird's Sam Gold 1, nw ne 36-20n-13w, sd 1000 ft. Producers O&G Co.'s W. H. Werner 1, se se 7-17n-11w, blew out making est 6 mil ft gas & sw flow, killed & sr, td 3973 ft.

CADDO PARISH—W. T. Bell et al's Bostick 1, sw sw 12-22n-16w, sd 2535 ft.

CALDWELL PARISH—Davis et al's La. Central Lbr. Co. 1, 14-11n-3e, sr, td 1850 ft. Terrell & Price's La. Central Lbr. Co. 1, nw ne 18-11n-3e, elev 206 ft, dr 2860 ft.

DE SOTO PARISH — Gaskell & Sanders' Guy 2, 3-11n-13w, tested with acid 1740 ft. Hester et al's Alston 1, ne sw 11-11n-16w, rur. Jack Clark et al's Moore 1, ne nw 1-13n-15w, dr 560 ft. E. T. Oakes' Johnson 1, ne nw 30-13-15, core coarse oolitic lime 5349 ft.

LINCOLN PARISH—Eastern Texas Prod. Co.'s Givens Est. 1, sw ne 2-17n-4w, sd 3503 ft.

NATCHITOCHES PARISH — Matthew Foremen et al's Poissoit 1, 9-10n-8w, rog. Plummer & McDaniel's Lizzie Walmsle 1, se sw 45-10n-8w, to abn, td 5101 ft in lime, mov rig to another lcn. Roy Raines et al's Fee 1, sw sw 28-9n-10w, set 8¼-in csg 2275 ft.

RAPIDES PARISH—C. D. Loe, Tr's Bentley Lbr. Co. 1, 20-5n-1w, rur.

RED RIVER PARISH—Tooke et al's J. Ober 1, 5-14n-10w, fsg 2100 ft. W. K. Williams' De Moss 1, ne ne 33-13-11, dr 2450 ft.

SABINE PARISH—G. W. Longley et al's Peavy-Wilson 2, ne ne 16-5n-9w, fsg 4207 ft. Geo. L. Pace's DeSoto Corp. 2, ne sw 27-10-13, dr 2900 ft.

WEBSTER PARISH—M. J. Kissick's O. M. Slack 1, sw nw 18-23n-10w, dr 2240 ft.

WINN PARISH — Red River Ref. Co.'s Tremont Lbr. Co. 1, ne ne 35-11n-1w, dr 1530 ft.

ARKANSAS

HEMPSTEAD COUNTY—Arkansas Drilling Co.'s Jones 1, ne se 11-14-24, wocs 10-in csg 160 ft. Dr. E. L. Austin's J. W. McWilliams 1, nw sw 19-13-23, wocs 10-in csg 140 ft.

LA FAYETTE COUNTY—Earl F. Fox's Coleman Bros. 1, nw ne 36-16-25, spd 10-in csg 80 ft. W. H. Harvey's A. M. Allen 1, ne sw 18-19-24, rur. Douglas Lawn's Camp 1, sw se 14-15-23, top Nacatosh 1612 ft, dr 2340 ft.

LEE COUNTY—Ark. La. P. L. Co.'s E. McDonald 1, sw sw 28-1n-4e, dr 3050 ft.

MILLER COUNTY—Beverley Oil Co.'s Commercial Nat. Bank 1, ne se 30-17-28, dk. W. F. Lacey's Gibson 1, sw nw 30-19-27, dr 3769 ft.

NEVADA COUNTY—Ira Gee's Scott 1, sw nw 23-10-22, dk.

UNION COUNTY — Alexander-Head Oil Co.'s Union Sawmill Co. 1, sw nw 28-17-13, sr 2300 ft. Mrs. R. K. Jones' J. Davis 1, nw nw 28-16-14, to test 2765 ft.

MISSISSIPPI

CLARKE COUNTY—Clarke County Oil Co.'s S. B. Kirkland 1, 10-2n-10e, wocs surface csg.

HANCOCK COUNTY—Gulf Ref. Co.'s R. J. Williams 1, ne ne 11-8s-15w, dr 1200 ft.

ISSAQUENA COUNTY — Pelican Oil & Gasoline Co.'s Steel Bayou Corp. 1, sw nw 14-12n-8w, lubricating, td 3125 ft.

JONES COUNTY—Snow-Black Pet. Co.'s Watson 2, ne sw 24-7n-13w, dr 1600 ft.

MADISON COUNTY—H. A. Wilson, Tr.'s Cepek 1, sw ne 24-9n-3e, co, td 2340 ft.

MONROE COUNTY—Miss. Pub. Serv. Corp.'s Edwards & Carter 1, ne se 12-13-18, rog. P. J. McAlpine's Chas. Rye 1, se sw 22-15-17, to shoot formation, td 2917 ft.

PEARL RIVER COUNTY—Gulf Ref. Co.'s May L. Williams 1, se ne 35-5n-17w, arr dr plug in 6⅝-in csg 3696 ft, td 3707 ft.

RANKIN COUNTY—Love Pet. Co.'s Pearl River-Interior Lbr. Co. 1, sw sw 15-6n-2e, spd 15-in csg 41 ft, dr 800 ft.

SIMPSON COUNTY—Berry Corp.'s Berry 2, sw sw 33-2n-4e, wocs 6¾-in csg 2048 ft.

WARREN COUNTY—Harry W. Elliott's R. L. Parker 1, 14-14n-1e, td 3200 ft.

WASHINGTON COUNTY — Perkins & Dees' Lee 1, nw sw 33-15-8w, sd 1200 ft.

ALABAMA

CLARKE COUNTY—Magnolia Pet. Co.'s Scotch Lbr. Co. 1, sw ne 17-10n-3e, elev 354 ft, top Selma 1702 ft, top Eutaw 2705 ft, cored soft coarse gray sand with salty taste 3893-95 ft, dr 3900 ft.

LAMAR COUNTY—DeSoto O&G Co.'s Gardner 1, nw nw 22-15-16, sr, td 4150 ft.

KANSAS

BARBER COUNTY—Lario et al's Whelan 1, cnw 32-31s-11w, dr 3673 ft. I.T.I.O. et al's George 1, cse sw 12-33s-10w, ru. National Ref. Co.'s Harader 1, nw sw nw 11-31s-13w, 15-in csg 481 ft, dr 1050 ft.

BARTON COUNTY—Atlantic Oil Production Co.'s Straud 1, cse nw 36-18s-11w, dr 2465 ft. Harris-Haun & J. Brouk's Dietz 1, sec 21-16s-15w, spudding.

BUTLER COUNTY — L. C. Hay et al's Bolin 1-A, se sw se 36-26s-8e, retreat twice, 1000 gals acid each time, pumping 12 bbls per day, may abandon.

CLAY COUNTY—Seidel Bron's Younker 1, cs½ se nw 21-9s-4e, dr 702 ft.

COWLEY COUNTY—Roth & Fourot's Fox 1, se sw 35-30s-7e, dr 1150 ft.

DICKINSON COUNTY — Dutch Oil Co.'s Phillips 1, cne nw 15-15s-1e, sd 2025 ft.

ELLSWORTH COUNTY — Elwell et al's Campbell 1, sw cor. 20-17s-7w, lcn.

GREENWOOD COUNTY—McGinnis' Sample 1, ne ne se 16-25s-10e, dr 605 ft. Greeley et al's Salter 1, sw se sw 28-25s-12e, td 38 ft, running 10-in csg. T. K. Simmons' Disney 1, sw se 35-22s-10e, hfw, D&A, 2320 ft.

HARPER COUNTY—Wood Brothers' Anthony 1, csw sw 17-31s-9w, fsg 4233 ft.

HARVEY COUNTY—Hollow et al's Swafford 1, nw ne nw 8-22s-1w, 20-in csg 114 ft, dr 550 ft.

KINGMAN COUNTY — W. C. McBride's

Wooleridge 1, nw ne 16-27s-7w, 15-in csg 755 ft, td 1207 ft.

McPHERSON COUNTY—Marileen Oil & Gas Co & Goering Brothers' Decker 1, nw se 20-18s-1w, set 10-in csg 1886 ft, td 1995 ft, fsg. Palmer & Phillips' Moddelmog 1, ne ne nw 8-21s-1w, br.

NEMAHA COUNTY—Portland & McKenna's Sudbeck 1, sw nw nw 20-1s-12e, Granite wash at 490 ft, D&A. Rose Oil et al's Penwell 1, ne nw se ne 20-1s-12e, (owdd) otd 1720 ft, ru to drill deeper.

RENO COUNTY—Sinclair Prairie Oil Co.'s Shepherd 1, se nw 22-26s-9w, dr plug. L. H. Wentz's Metcalf 1, se ne sw 2-24s-7w, dr 3275 ft.

RICE COUNTY—Langston et al's Markle 1, ne ne sw 1-20s-9w, sd. Aylward-Trees et al's Belder 1, sw se ne 27-20s-7w, hfw 3720 ft. Robertson et al's Johnson 1, nw sw 22-19n-8w, dr 1700 ft. Reserve Development Co.'s Heinz 1, ne sw se 8-18s-10w, pump 20 bbls per day, may abandon. Continental Oil Co., Empire Oil & Refining Co, and Shell Petroleum Corp's Bennett 1, nw se 25-12s-8w, pumped 1193 bbls 2 hrs, 1000 gals acid & pumped 1294 bbls 24 hrs. Dietrick et al's Fitzpatrick 1, cne ne 30-21s-8w, dr 2075 ft. Elwell et al's Porter 1, ne nw 5-18s-7w, br.

ROOKS COUNTY—Ashby et al's Doughty 1, csw sw 15-8s-19w, dr 2325 ft. Phillips Petroleum Corp's Dopita 1, csw sw 31-8s-17w, retreat 1000 gal acid, no test.

RUSSELL COUNTY — Central Petroleum's Benso 2, nw ne sw 4-14s-15w, lcn. Lario Oil & Gas Co.'s Neidenthal 1, nec 23-14s-15w, ru.

SEDGWICK COUNTY—Trees Oil Co & Derby Oil Co et al's McMinn 1, nw sw ne 36-26s-1e, dr 2219 ft. Cromwell-Lewis' Hammon 1, sw nw 23-27s-2w, (owdd) ru. Sovereign Oil Co's Nichols 1, cnw se 20-25s-1w, dr 2405 ft. E .B. Shawver et al's Schulte 1, ne cor 13-28s-2w, dr 2952 ft.

SUMMER COUNTY — Morgan & Flynn's Mercer 1, nw ne nw 36-32s-1w, td 3345 ft, shut down. Wentz & Continental's Small 1, nw sw 5-33s-4w, rur.

TREGO COUNTY—Alma Petroleum Co et al's Rhodes Estate 1, csw sw 14-11s-23w, sd 4020 ft. Mid-Kansas Oil Co's Kline 1, sw se 19-14s-24w, sd 800 ft.

WOODSON COUNTY—Sheedy et al's Hassenpfling 1, nw ne 34-25s-14e, D&A.

OKLAHOMA

ALFALFA COUNTY — Tex-O-Kan Development's Acre 1, csw ne 14-24n-11w (owdd) sd 6460 ft.

ATOKA COUNTY—L. A. Fitts' Blankenship 1, ne nw 19-3s-10e, dr 630 ft. Malernee et al's Greenville National Bank 1, nw se 36-2s-13e, dr 1980, shale.

BECKHAM COUNTY—Price & Watshorn's Heard 1, ne sw 17-8n-26w, fsg 765 ft.

CADDO COUNTY—Denver P&R Noe 1, nw sw sw 34-10n-10w, dr 11,320 ft.

CARTER COUNTY — Hudson & Poland's Sullivan 1, ne se 5-5s-1w, sand, so 2938 ft, dr 3220 ft. George Pace et al's M. Jack 1, ne nw nw 10-4s-4w, dr 1522 ft. Daphine Oil Co's Hooks 1, se nw nw se 5-1s-2w, dr 862 ft shale. McHenry et al's Ratliff 1-A, nw sw 28-1s-2w, wocs.

CLEVELAND COUNTY — Phillips Petroleum Co et al's Community-Baker 1, cse nw, 11-9n-2w, dr 6521 ft.

COAL COUNTY—Brookshire et al's Rowland 1, nw ne ne 18-3s-10e, dr 3620 ft.

COMANCHE COUNTY — F. F. Stevens' Green 1, se sw 2-1n-13w, dr 1120 ft. Heiden-Taylor's Crutcher 2, cne 11-1n-12w, hfw 606-613, dr 620 ft granite wash.

COTTON COUNTY—Ben Russell's Fowler 1, se nw 21-4s-12w, sd 3570 ft.

GRADY COUNTY—Mid-Western Oil, Inc. Carter 1, nw ne se 32-3n-7w, dr 210 ft.

HARPER COUNTY—Sinclair Prairie's Neff 1, nw se 21-26n-24w, rur.

HUGHES COUNTY—Olympic Oil Co.'s McClassen 1-A nw se nw 12-9n-8e, flow est 15m gas, testing for oil. Smith et al's Farmer 1, se nw 32-5n-9e, dr 495 ft.

JACKSON COUNTY—Gypsy Oil Co.'s Kelly 1, nec 10-1n-20w, (owpb) swab 22 bbls of 43 gravity oil in 6 hrs, sd.

JOHNSTON COUNTY — Oklahoma Oil Corp's May Tubbi 1, sw ne se 11-2s-8e, dr 1709 ft.

KAY COUNTY — Carter Oil Co's W. S. Cline 1, se sw se 16-28n-5e, dr 730 ft.

KINGFISHER COUNTY—Jadeka Development Co's Frakes 1, csw ne sw 16-15n-6w, sd 5111 ft.

KIOWA COUNTY — Bailey & Johnson's Potts 1-A cel nw nw sw 31-7n-14w, dr 250 ft.

LEFLORE COUNTY—East Oklahoma O& G Co's Metcalf 1, swc 2-4n-26e, dr 1521 ft, carrying 8-in csg. Murdock et al's Fee 1,, sw ne sw 15-5n-25e, dr by tools, td 2425 ft.

LINCOLN COUNTY—L. G. Hulse's Sloan 1, sw nw se 19-17n-3e, co new hole 720 ft. The Texas Co's Gessman 1, se ne 33-14n-4e, rip csg 3839-3842, no show, bailing. Mid-Continent Petroleum Corp's Bolby 1, cse sw 27-12n-2e, waiting for rotary tools.

LOGAN COUNTY—W. N. Anthony's Fruin-Eckman 1, se sw 4-16n-1e, coring 5231-5243 ft, recovered 5-in.

McCLAIN COUNTY — Denver P&R Co's Newborn 1, cse sw 22-5n-1e, dr 5976 ft.

MURRY COUNTY—T. E. Revels et al's Wolfe 1, nec 18-1n-2e, sd 2430 ft. Gilcrease Oil Co's Brown 1, swc 26-1n-2e, dr 1552 ft conglomerate.

NOBLE COUNTY—The Texas Co et al's Voss 1, sw ne se 28-22n-2w, sd, 4870-72 ft, sandy dolomite. Magnolia's Crawford 1, se nw 27-21n-2e dr 3106 ft. Continental Oil Co et al's Bennett 1, se nw 19-20n-1w, show salt, dr 5188 ft in 2nd Wilcox. Vaughn Development Co's Loula 1, ne se sw 16-22n-1e, br.

OKFUSKEE COUNTY—Delton Oil's Fixico 1, sec 7-11n-8e, dr 3136 ft. Carter Oil Co's W. H. Dill 1, cnw se 2-1n-8e, dr 20 ft.

OKLAHOMA COUNTY—Gypsy Oil Co et al's Community-Grant 1, cse nw 27-13n-4w, dr 7284 ft. Springrose Development Co's Edwards 1, cse se 19-11n-1e, 400 ft of drill pipe in hole, sd 6540 ft in shale.

OSAGE COUNTY—Empire Oil & Refining Co's 1, se ne 3-25n-3e, dr shale 3298 ft. Peters Petroleum Co & Norbla O&G Co's 1, swc 15-25n-5e, dr 1712 ft. Norbla O&G Co's 1, nw se 31-24n-7e, sd 2525 ft.

PITTSBURGH COUNTY—Arkoma's Cummings 1, nw ne se 29-4n-14e, dr 760 ft.

PONTOTOC COUNTY—Riddle et al's Barnes 1, se nw se 21-5n-4e, recement off drill pipe. Boyle et al's Newborn 1, sw ne 31-5n-4e, cemented off bottom wtr, sd. Jarnett Pet's Johnson 1, se nw 28-4n-4e, dr 700 ft. Dandridge et al's Stafford 1, nwc 5-1n-6e, sd 680 ft. Gillette & Kroeger's Duver 1, nw se 1-1n-7e, dr 75 ft. Paul R. Robb's Vittetoe 1, cne se 11-5s-4e, sd. Schermerhorn Oil's Banks 1, sw se se 25-2n-6e, lcn.

POTTAWATOMIE COUNTY—Stanolind O&G Co & Amerada Petroleum Co's Goodman 1, sw ne ne 5-10n-4e, cored 4420-25 ft, so. Phillips-Gypsy et al's Flynn 1, ne nw 17-6n-3e, dr 3170 ft.

SEMINOLE COUNTY—Wrightsman Oil Co's Smith 1, nw se 25-10n-7e, rur. Moran et al's Brindle 1, sw ne 27-6n-5e, rig.

STEPHENS COUNTY — Carter Oil Co's Hilderbrand 1, csw se ne 1-3s-7w, 46 ft surface pipe. Carter Oil Co's T. H. McCasland 1, cnw nw sw 22-1s-4w, rig.

WASHITA COUNTY — Anadarko Basin's Ask Wolf 1, ne sw 23-9n-17w, ru & sd. Oklahoma Mid-Western's Dock 1, swc 21-8n-18w, co 2060 ft.

MONTANA

BIG HORN COUNTY—Enterprise Oil Co. and Embar Drilling Co.'s Lynde 2, sw nw se 21-6s-35e, dr 3550 ft.

FERGUS COUNTY—H. C. Rowland et al's Woodward 1, se se sw, 20-14n-24e, dr 2800 ft, so.

GLACIER COUNTY—Barmac Production Co.'s Bruning 1, sw sw 1-31-5w, dr 1300 ft. Producers Development Syndicate's Helgason 1, nw nw 29-32n-4w, dr 2690 ft.

LIBERTY COUNTY—J. H. Hamilton Syndicate's Northern Farms 1, c ne sw 10-37n-5e, dr 700 ft.

PONDERA COUNTY — California Co.'s Northwest Properties 1, sw ne se 20-28n-4w, dr 2200 ft.

TETON COUNTY—E. K. Cheadle Jr.'s Balsinger 1, ne se nw 20-27n-5w, dr 2185 ft.

WYOMING

ALBANY COUNTY—Ohio Oil Co.'s Chappell 1, sw nw 28-21n-76w, dr 3780 ft.

CARBON COUNTY—Ohio Oil Co.'s Sid Morris 1, nw se 6-20n-77w, dr 1680 ft. Earl W. Readers Inc.'s Union Pacific 1, c sw sw 19-20n-83w, dr 4936 ft. Petroleum Exploration Co.'s Buck Springs 2, sw se sw 29-23n-88w, dr 2000 ft.

CONVERSE COUNTY—E. B. Jones Pittman 1, ne nw 27-32n-69w, dr 750 ft. John Askard's Daniels 1, sw se 17-32n-71w, dr 750 ft. Poison Lake Synd.'s Govt. 1, s½ ne sw 33-31n-72w, dr 400 ft.

FREMONT COUNTY—Mid American Oil Co.'s Sheep Creek 1, s½ ne sw 4-28n-98w, moving in. Sidney H. Keoughan and Monongahela Oil Co.'s Wisda 1, ne se se 13-28n-93w, dr 2200 ft.

HOT SPRINGS COUNTY—California Exploration Co.'s Govt. 1, ne se ne 12-44n-98w, dr 1760 ft.

COLORADO

HUERFANO COUNTY—S. W. Pressey et al's Ojo 1, sw ne 10-29n-69w, sd 2900 ft. S. W. Pressey et al's Test 1, 4-29n-69w, spd 133 ft.

MONTEZUMA COUNTY — McElmo Oil Co.'s West 1, ne nw ne 31-36n-17w, completed as 1,000,000 cu. ft. gas well 1756 ft.

PARK COUNTY—South Park Oil Co.'s State 1, se se sw 16-11s-75w, rig.

PROWERS COUNTY—Trojan Oil & Gas Co.'s Lotus 1, nw ne ne 15-23s-46w, ur 8¼-inch cas 3290 ft, to set on bottom at 3338 ft.

NEW MEXICO

CHAVES COUNTY—Warman Oil Trust's Weldon-Hoar 1, nw se 9-14s-25e, sd 1450 ft.

EDDY COUNTY—Cook-Ironsides 2, sw sw 8-20s-29e, pb from 1598 ft, water 1570-73 ft.

SAN JUAN COUNTY—Aztec Oil Producers, Inc.'s Test 1, se se 28-30-11, ur to set pipe to bottom of hole, td 1490 ft. Ted Whetstine's test 1, e½ ne 19-30n-11w, sd 1440 ft.

MICHIGAN

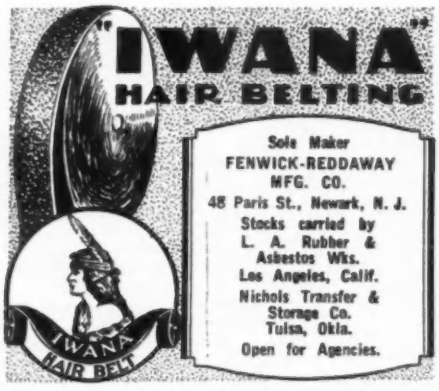
MIDLAND COUNTY — McClanahan Oil Co.'s Oliver 1, Porter twp, sec 23, dr 2900 ft; Converse 1, Greendale twp, sec 28, pb from 3492 ft to 2950 ft and testing Traverse lime. Geo. Hanner's Hoyt 1, Jasper twp, sec 24, fsg 1150 ft. Greendale-Lee Oil Dev. Co.'s Hitsman 1, Lee twp, sec 13, sd 2550 ft. Howard Patterson's Haskins 1, Ingersol twp, sec 26, sd 840 ft. W. J. Sovereign's Mode 1, Geneva twp, sec 25, lcn.

ISABELLA COUNTY—W. J. Bernier's Duncan 1, Vernon twp, sec 9, sd 3900 ft. McClanahan Oil Co's Sweeney 1, Denver twp, sec 33, ru. Michigan Gas & Oil Co.'s Hanson 1, Rolland twp, se se se 13n-6w, sec 33, lcn.

OGEMAW COUNTY — McClanahan Oil Co.'s Gulliford 1, West Branch twp, sec 29, test so 2724 ft; Boutell 1, Ogemaw twp, sec 5, skidded, driving pipe 100 ft. C. A. Perry's Wobig 1, Mills twp, sec 6, sd 1762 ft. W. C. Mee's Gibbs 1, Mills twp, sec 30, sd 2150 ft. Burks White, Canard 1, Mills twp, nw nw ne, 12n-3e, sec 22, lcn.

MONTCLAM COUNTY—Daily Crude Oil Co.'s Blair 1, Ferris twp, sec 11, dr 3350 ft; Gustavason 1, Home twp, sec 2, dr 250 ft; Christensen 3, Home twp, sec 3, dr 3035 ft. Theodore Oil Co.'s Sherwin 1, Home twp, sec 13, sg 3057 ft, so 3068 ft, dr 3160, will go to Dundee. Old Dutch Oil & Gas Co.'s Fargar 1, Belvadire twp, sec 11, set csg 1046 ft, dr 1090 ft. Walter & Miller's Durbin 1, Crystall twp, sec 11, br. Rex Oil & Gas Co.'s Johnson 1, Home twp, sec 17, fsg 2000 ft; Albaugh 1, Home twp, sec 34, sd 1000 ft. Northern Oil Co.'s Robinson 1, Richland twp, sec 27, sd 460 ft; McGilvery 1, Richland twp, sec 34, sd 1300 ft. Tope-Voorhees-Blunt's Neff Ranch 1, Day twp, sec 22, dr 330 ft. Atha Oil Co.'s Davenport 1, Ferris twp, sec 16, dr 540 ft. Mammoth Pet. Co.'s Thomas 1, Home twp, sec 11, dr 500 ft. Garfield Oil & Gas Co.'s Wymer 1, Home twp, sec 11, dr 250 ft. Allen Park Oil Co.'s Stephens 1, Home twp, sw se sw sec 36, lcn.

MECOSTA COUNTY—Hall LaMee Synd's Oliver 1, Martiny twp, sec 23, sp. Bryan &



OWNERSHIP MAPS

ST. LANDRY PARISH
LAFAYETTE PARISH
South Louisiana

We have just completed parish ownership maps of St. Landry Parish and Lafayette Parish, both drawn to scale 2" equals 1 mile.
St. Landry Parish in north half and south half sells for $8.00 per half or $15.00 complete.
Lafayette Parish in one map at $10.00.

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Martin's Sheets 1, Millbrook twp, sec 35, dr 450 ft. Columbia Oil & Gas Co.'s Hutchinson 1, Hinton twp, sec 14, st ream 610 ft. Colmur Oil & Gas Synd's Sapp 1, Morton twp, sec 6, sp.

SAGINAW COUNTY—Chapin Oil & Gas Co.'s Sutliff 1, Chapin twp, sec 16, sd 950 ft. Fred Stork's Poultry Farm 1, Richland twp, sec 33, sp.

LAPEER COUNTY — Gordon Oil Co.'s Smith 1, Arcada twp, sec 4, dry in Berea sand, dr 1615 ft. Fred W. Craft's Gerwolds 1, Oregon twp, sec 9, dr 500 ft.

NEWAYGO COUNTY—Newaygo Prospecting Co.'s Grass Lake 1 (Ichenberg Bros.), 16n-11w, sec 7, testing so 3550 ft, Monroe lime. Newaygo Oil Co.'s Bates 1, Sherman twp, sec 12, sd 6600 ft. Muskegon Development Co.'s Kolbe 1, Beaver twp, nw sw se, 15n-14w, sec 31, lcn.

HILLSDALE COUNTY—B. D. Chandler's Brickner 1, Wright twp, sec 11, sd 1100 ft. Chas. Anderson's Cousens 1, Jefferson twp, sec 14, sd 830 ft.

MISCELLANEOUS—Clare County: McClanahan Oil Co.'s Frackelton 1, Lincoln twp, sec 18, dr 3350 ft. Gratiot County: Mid State Development Co.'s Yost 1, Bethany twp, sec 27, dr 3000 ft. Bay County: A. H. Webber's Wasbanski 1, Kawkaslin twp, sec 36, dr 560 ft. Arenac County: Oil State Corp.'s Sheffer 1, Mason twp, sec 18, dr 2155 ft. Lenawee County: P. D. Snavely's Lindsay 1, Madison twp, sec 6. lcn.

CALIFORNIA

KERN COUNTY

BUENA VISTA HILLS—E. C. Arnold's No. 1, 34-31-24, dr sandy shale, 3995 ft. Western Pet. Co.'s U.S.P.P. 6, 24-32-24, lcn.

COMANCHE POINT—Comanche Oil Co.'s No. 1, 15-32-29, dr sandy shale 3900 ft. Tejon Ridge Oil Co.'s No. 1, 23-32-29, sd 200 ft.

EDISON—Elyod Pet. Corp.'s No. 1, 19-30-30, td 1910 ft, bailed water, no gas or oil. Mitchell-MacMillan Co.'s No. 1, 8-30-29, lcn. Mountain View Dev. Corp.'s Spangler 1, 12-30-28, dr hard sand 4300 ft (corrected depth).

LOST HILLS — Associated Oil Co.'s Williamson 1, 2-26-20, td 7858 ft, plugged to 6940 ft, r 6844 ft.

MT. POSO—Associated Oil Co.'s Fortine 1, 30-27-28, rur. Ohio Oil Co.'s Van Houten 1, 20-27-27, preparing to abn, 2632 ft.

McKITTRICK—Shell Oil Co.'s Midway-Premier 1, 21-29-21, to abn, 5250 ft. Standard Oil Co.'s No. 45, 15-30-22, dr sandy shale 3437 ft. Welport Oil Co.'s No. 105, co 1195 ft.

NO. SEMITROPIC—S. T. Alexander's Shields 1, 29-25-21, sd 1426 ft.

PIONEER ANTICLINE—Fisher & Welton's Harris 1, 35-11-23, dr shale 1095 ft.

TEMBLOR HILLS—Robt. Fister's No. 1, 2-32-22, dr shale 840 ft.

WHEELER RIDGE—Badger Oil Co.'s El Tejon 1, 31-1-19, sd 6001 ft.

KINGS COUNTY

AVENAL—Carl Weller's Baby King 2, 11-23-16, running 6⅝-in csg, td 1425 ft.

TULARE LAKE DISTRICT — Armadillo Gas Co.'s No. 1, 32-22-20, recemented 6¼-in csg 1615 ft, td 1745 ft. Commonwealth Cons. Co.'s No. 1, 21-22-20, dr blue shale 1670 ft; No. 2, rud, portable. Tulare Basin Gas Co.'s No. 2, 2-23-19, sd 1208 ft.

TULARE COUNTY

ALPAUGH—Trico Oil & Gas Co.'s Magee 1, 33-24-22, dr shale 2570 ft.

MADERA COUNTY

DOS PALOS—Pure Oil Co.'s Chowchilla 1, 7-10-14, dr sandy shale 5110 ft.

SAN JOAQUIN COUNTY

TRACY—Milham Exploration Co.'s Connolly 1, 5-4-5, to test for gas, td 5800 ft.

SANTA BARBARA COUNTY

GOLETA—Shell Oil Co.'s Bishop 1, 20-4-28, dr sand and shale 1178 ft. Hastain Stone's Simonds-Campbell 1, 9-4-28, sd 2785 ft.

LOMPOC—Lompoc Pet. Co.'s Beauterbaugh 2, 18-17-34, dr shale 2975 ft.

LOS ALAMOS—Petroleum Securities Co.'s Hancock-Los Alamos 1, 31-8-32, grading roads.

SANTA MARIA—Union Oil Co.'s Moretti 1, 24-10-34, dr sand and shale 2388 ft.

SAN LUIS OBISPO COUNTY

CHOLAME—Willett Oil Assn's Jack 2, 10-25-15, dr shale 1650 ft.

VENTURA COUNTY

BARDSDALE—H. H. Humphries' No. 1, 18-3-19, sd 275 ft. To drop from report.

CONEJO—American Oil Co.'s Powell 1, 33-2-20, sd 3060 ft.

FILLMORE—Laing & Jacob's Snodgrass 1, 32-4-19, sd 700 ft. To drop from report.

HOPPER CANYON—Oil Ridge Oil Co.'s Moran 3, 1-4-19, cl 972 ft.

LAS POSAS—Las Posas Pet. Co.'s Mahan 1, 22-3-20, swabbed water, trace oil 7370 ft.

OJAI—Rancho Oils' Rancho Santa Ana 1, moving in material.

PIRU—Piru Oil Co.'s Holser 1, 14-4-18, dr shale 740 ft.

SANTA PAULA—J. W. Mosher's No. 1, 22-4-21, cl and r 2115 ft.

SESPE—H. A. Ivers' No. 11, 1-4-20, testing on pump 1475 ft. Merchants Pet. Co.'s Cochran 4, 1-4-20, redr 710 ft, td 1280 ft. Sullivan & Roberts' No. 1, 28-5-19, dr shale 310 ft. Topa Topa Oil Co.'s No. 1, 33-5-19, dr shale 3030 ft.

SHIELDS CANYON—The Texas Co.'s No. 128, 4-3-19, rur.

SIMI—American Drilling Co.'s No. 1, 6-2-17, dr shale 385 ft. C. L. Anderson's No. 13, 36-3-18, dr shale 510 ft. Williamson & Danaker's No. 1, 36-3-18, sd 1010 ft.

SULPHUR MOUNTAIN—Wm. A. Kirk's No. 5, 21-4-22, running 8¼-in csg, blank liner, td 1990 ft.

MISCELLANEOUS

FRESNO COUNTY—G & E Dev. Co.'s No. 1, 36-16-14, rur. Western Gulf Oil Co.'s S. P. L. 1, 15-17-15, replugging to 8600 ft, to test, td 8868 ft. The Texas Co.'s No. 1, 35-20-14, dr Kreyhagen shale 1113 ft. Bergman Oil Co.'s Ora Loma 1, 12-12-11, sd 6006 ft. Russ Oil Syndicate's No. 1, 28-12-11, co 4020 ft.

MONTEREY COUNTY—Jas. M. Douglas' No. 1, 36-22-9, dr shale 4110 ft.

YOLO COUNTY—Pacific Northern Gas & Oil Co.'s No. 1, 23-12-3, sd 6770 ft.

SOUTHERN CALIFORNIA

ARTESIA AREA—Vanco Dev. Co.'s Millard 1, 25-3-12, rig.

ATHENS DIST.—John W. Sherman's Johnson 1, 2-3-14, lcn. Woodward Oil Co.'s No. 1, 12-3-14, dr gray sand 3790 ft.

ATWOOD—Midrich Drilling Co.'s Vejar 1, 26-3-9, dr brown shale 2096 ft.

BREA CANYON — Pressel-Perry-Tull's Baird 1, 30-2-9, co 3079 ft.

CARBON CANYON—Tehema Pet. Corp.'s (was Pet. Dev. Co.) Kramer 1, 33-2-8, dr shale 2025 ft.

FAIRVIEW DIST. — Explorers Drilling Co.'s Norris 1, 9-6-10, sd 960 ft. Speik Oil Co.'s Derby 1, 9-6-10, sd 1055 ft.

FULLERTON—Union Oil Co.'s Fullerton Heights 1, 22-3-10, dr sand and shale 4630 ft.

HUNTINGTON BEACH, on tidelands—Black Eagle Oil Co.'s No. 1-B, Permit 194, 32-5-11, to plug to 1800 ft, to redr, td 3987 ft.

NEWPORT—Platt & Collins' No. 1, 14-6-10, dr brown shale 1125 ft. Pioneer Drilling Co.'s Banning 3, 29-6-10, sd 6452 ft.

NO. LONG BEACH—Geo. L. Clayton's No. 1, 31-3-12, co 6550 ft.

PICO — Frontier Oil Co.'s No. 1, 12-2-12, wocs, 12½-in csg 500 ft, td 1460 ft.

PLACENTIA—Placentia Dev. Co.'s Verde 1, 35-3-9, redrilled to 3040 ft, sd, td 4250 ft.

SAUGUS—International Oil Dev. Co.'s Powell 1, 35-5-16, dr shale 2160 ft.

SURF—W. G. Bradford's B. B. 1, lcn. This well is almost midway between Huntington Beach and Newport, close to ocean front.

WEST WHITTIER—Midfield Oil Co.'s Walker 1, 19-2-11, testing upper zones with formation tester, td 4867 ft.

SAN BERNARDINO COUNTY — Great American Pet. Co.'s Gapco A-1, 18-2-8, sd 2725 ft; Gapco B-1, fsh 3100 ft; Gapco C-1, cellar.

SAN DIEGO COUNTY—San Diego Gas & Pet. Corp.'s No. 1, 32-18-2, to cement 11¾-in csg 4020 ft, td 4070 ft.

New Equipment for the Field

Machinery....Tools....Catalogs....Books

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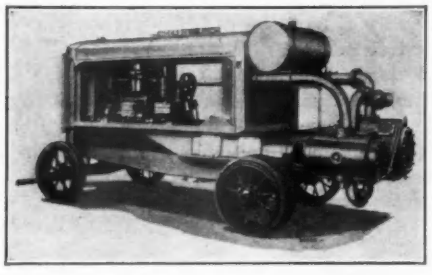
Portable Compressor

INGERSOLL-RAND COMPANY

Developed particularly by Ingersoll-Rand Company, New York, N. Y., for service in the oil and gas fields, where pressures are high and requirements are exacting, the Type XL Portable Compressor is made in two sizes, one for 300 pounds operating pressure (and 500 pounds starting pressure), the other for 500 pounds operating pressure (and 1000 pounds starting pressure). Piston displacements are, respectively, 330 and 270 cfm.



Ingersoll-Rand Portable Compressor

The Type XL Portable Compressor is a combination of either the I-R Type H oil engine or the Waukesha gasoline engine with the well-known I-R Type XOB horizontal, double-acting compressing cylinders, of which more than 2000 are now in service. The Type XOB cylinder is used in several types of I-R compressors for gas-lift service.

The complete Type XL Portable Compressor, with fuel tanks and receiver, is mounted on a one-piece, cast-steel frame, equipped with rubber tires and steel wheels, fitted with roller bearings. The steel top has removable steel side covers arranged for locking.

Poster Threader

RIDGE TOOL COMPANY

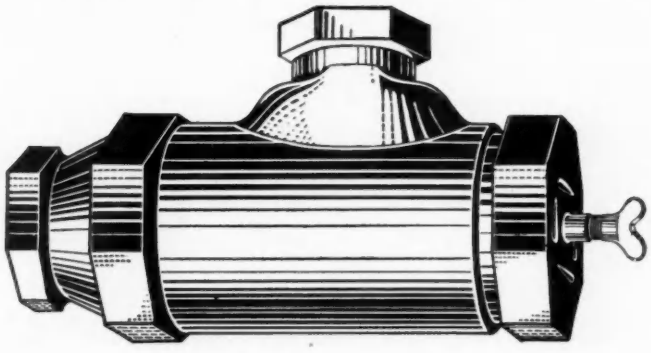
Ridge Tool Company, Elyria, Ohio, has announced a new poster style pipe threader which embodies a number of important improvements. The new tool weighs only 12 pounds and is small and compact; strength and ruggedness come from special metals and design. Drive is direct, from handle to head to chasers in a straight line, to give precision to the cutting, eliminating cocking or wobbling, resulting in clean accurate threads. Posts carry no load; they only taper the threads. They are full-floating and extra heavy to protect the tool in rough handling. Chaser locks are entirely enclosed. New type ratchet control operates with thumb lever which snaps into exact forward and reverse or locked position for solid die. Arrow shows direction of pull. Turn of knurled gauge ring sets workholder to size, then it is put on pipe and tightened with only one screw. Chasers are interchangeable and fit any other make of poster threader. Four sets, one to each size, one-inch to two-inch pipe.

Gas Mixer

THE MOLECULATOR COMPANY

The Moleculator Company of Tulsa has perfected a new type of gas mixer for use on drilling boilers and for other industrial purposes. The device will fit any type of boiler or burner and accomplishes a swirling, mixing motion and is set in from 12 to 36 feet ahead of the burner itself.

A perforated plate at the intake receives the gas and it is carried into an expansion chamber where a more efficient mixing is accomplished through an automatically controlled



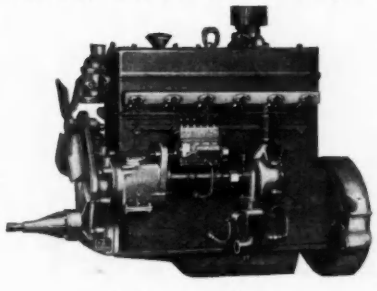
valve that brings in the air through an orifice. The front nozzle is removable to accommodate changes in orifice size or to various pressures. A perforated plate at the intake breaks up the molecules of gas in the manner described.

Four smaller orifices are set at an angle to afford a suctional motion which in turn operates a flutter valve that works automatically thus bringing in a greater volume of air to mix with the volume of gas. A higher rate of combustion is obtainable through this action.

Diesel Engine

THE GUIBERSON CORPORATION

The Guiberson Corporation, Dallas, Texas, has introduced a line of Diesel engines for trucks and buses, oil well pumping and other industrial power requirements. The new line of industrial engines was the outgrowth of the company's success with its Diesel aircraft engine.



Guiberson Diesel

The special patented feature of the Guiberson engine is the synchronization of fuel supply, timing, and air supply so that all are controlled by one throttle, and proper proportions and relations of each automatically assured at all speeds, the manufacturer claims.

The engine has been perfected during several years of experimental work. A 7½-ton truck powered with this

Diesel engine was driven all over the United States. A loaded truck of this size was driven recently from Dallas to Tulsa, a distance of 300 miles, with a full operating cost of $1.75, the manufacturer has announced.

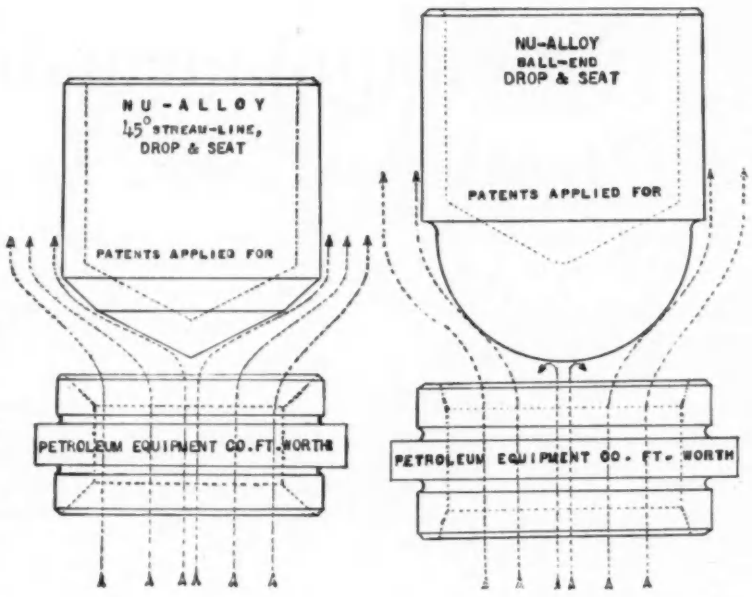
Drop and Seat

PETROLEUM EQUIPMENT COMPANY

Petroleum Equipment Company, Fort Worth, Texas, manufacturers of pumping equipment, announce that it is introducing a new streamline drop and seat, although continuing to manufacture its ball end drop and seat. This drop and seat has been tested under the most severe pumping conditions in the Mid-Continent and production records indicate from three to 10 times more service, according to the manufacturers. The outstanding feature of Nu Alloy Ball End Drops, as well as the new streamline drop and seat is that no special crown equipment is required—they will operate in any standard or A.P.I. valve crown.

The Nu Alloy streamline drop and seat incorporates a combination of angles that eliminate turbulence and velocity which are present when flat surfaces oppose the flow of fluid. The streamline drop is especially resistant to erosion as the taper on the end of the drop reflects the fluid clear of the sealing seat as shown in the drawing.

The manufacturer of Nu Alloy Ball End and Streamline Drops and Seats is controlled in our own plant with laboratory precision from the machining from the bar stock to the heat treating in electric furnaces operated by automatic pyrometer control . . . then precision ground to size after which each drop is hand lapped into its individual seat, insuring a perfect seal and resulting satisfactory service.



Nu Alloy Drops and Seats are available in a number of different grades of stainless steels . . . with various corrosive and erosive resisting properties . . . they are also available in tool steels, monel and bronze. All Nu Alloy seats have normalized rim sections that eliminate breakage.

Tractor

TRACKSON COMPANY

Trackson Company, Milwaukee, Wisconsin, has announced a new pipe line crawler-tractor—the Model GI Trackson McCormick-Deering, which was designed and built especially for pipe line work and for use with operating equipment. Many exclusive features are claimed for the tractor.

To meet the demand for a tractor that will move backward and forward with equal agility, a directional speed transmission is available which gives three forward and three reverse speeds. A standard four-speed forward and one reverse speed transmission is also furnished if desired.

The tracks are wide spread to give stability with side loads, and extend ahead of the motor to allow operation of front-end equipment without excessive counterweights.

The GI-30 develops 30 drawbar horsepower, and mechanical features have been studied to assure minimum repair and service problems in the field. A full line of laying equipment is available, including five different types of pipe booms, two types of winches, earth boring machines, pole erectors, backfillers, shovels, etc.

Bench

OSTER-WILLIAMS

Oster-Williams, Cleveland, Ohio, has announced addition of a new pipe welding assembly bench to its line of specialties. This new fixture is capable of handling all sizes of pipe up to 12 inches in diameter, and will line up and hold in position for tacking, fittings, flanges and branches at any angle. An extension which may be moved to any angle can be supplied for handling longer lengths.

An adjustable elevator, which may be used at any position on the main bench or on the extension, controls the vertical alignment of the work. Angle alignment is obtained by setting elevator to desired angle.

CONTINENTAL NATIONAL BANK

"That Bank IS Oil-Minded"

Two men, one a well known independent producer and the other an executive of one of the major companies, were overheard talking about banks. The name, Continental Bank of Fort Worth, came up and the producer emphatically said: "That Bank IS Oil-Minded."

This bank has always looked with favor upon the oil business. Whether the industry was "up" or it was "down," we have always recognized it as one of the basic businesses of our nation, producing and marketing a necessitous product.

Continental National Bank
of Fort Worth

NEWS *from the* *Industry's* EQUIPMENT MAKERS

New Manufacturers Sales Agency Organized in Houston

Well Equipment Corporation has been organized as a manufacturers sales agency with headquarters in Houston, Texas, to represent a select line of drilling and production equipment.

C. K. Stillwagon, formerly vice president and general manager of Oil Equipment Sales Corporation, is president and general manager of the new corporation, and S. H. Smith is secretary and treasurer.

This new sales organization represents in the Gulf Coast the following manufacturers: Hamer Oil Tool, Ltd., stopcocks, E-Z-Out liner sleeves and mud pump valves; Kibele Manufacturing Company pistons and swabs; C. A. Fischer Company free-wheeling gauge cocks; Harbison-Fischer Company balls and seats, oil savers and stuffing boxes; and the Stillwagon wing union.

Office and warehouse has been opened at 2023 Semmes Street, Houston.

Two Orders Placed For Naylor Pipe

Two orders for Naylor Spiral Weld Pipe for gas lines have been booked by Naylor Pipe Co., Chicago, Ill., according to a recent announcement by E. W. Hough, vice president and director of sales. Five miles of 16-inch pipe will be required for a gas vacuum line to be laid by Phillips Petroleum Company, Burbank, Okla. Several miles of 16-inch pipe will be used for a pressure gas line of American Natural Gasoline Co., Shamrock, Texas.

Colorado Geophysicists Open New Offices in Denver

Colorado Geophysical Corporation has opened offices in the Midland Savings Building, Denver, Colorado. John H. Wilson, formerly with the Midwest Refining Company, is president of the corporation. Wilson was also assistant professor of geophysics at the Colorado School of Mines at Golden, Colorado, for a time.

Keating Ransone, formerly secretary and office manager for Geophysical Service, Incorporated, of Dallas, Texas, has been appointed office manager for the Denver firm. Seismograph surveys are being conducted in the Rocky Mountain area.

G. H. Wallace to Head New Diesel Sales Force

G. H. Wallace, for 14 years manager for one of the country's largest Diesel manufacturers, has been appointed sales

G. H. WALLACE

manager of Guiberson Diesel Engine Company, Dallas, Texas, and is beginning the formation of a national selling organization.

United States Rubber Products Opens Warehouse at Houston

United States Rubber Products, Inc., mechanical goods division, has a new location for its South Texas warehouse, 1310 Franklin Avenue, Houston. R. M. Cooper is manager of the branch.

This warehouse provides a complete line of mechanical rubber goods as well as rubber covered wire and rubber proof wire.

Charles N. Hough Company Opens Warehouse at Tulsa

Charles N. Hough Manufacturing Company, Franklin, Pennsylvania, will open a warehouse at Cameron and North Boston Streets in Tulsa on August 1. The company has leased 7000 square feet of floor space for the stocking of a complete line of Hough oil well pumping equipment. The company, heretofore, has never carried a stock in western territory.

L. L. Reib, factory representative, will be moved from Franklin and will be in charge of the warehouse.

The company sales personnel in the Mid-Continent will remain the same, including C. O. Shumaker, Tulsa; C. S. Vogel, Fort Worth; and Frank L. Scott, Tyler.

Diamond Metal Company Opens New Houston Office and Plant

Diamond Metal Company recently completed its new home at 6945 Canal Street, Houston, as the headquarters office and plant of the company. This new building has resulted from the necessity for more spacious quarters in line with the growth

New home of Diamond Metal Company at Houston

of this company during the past two years.

Diamond Metal Company, represented in foreign fields by Oilfield Equipment Company, 30 Church Street, New York City, manufactures Diamond Tube metal and Diamond Metal Inserts for the oil industry and for general industrial application wherever tools are subjected to abrasive wear.

The company distributes in the Gulf Coast territory Swedish high carbon welding rod.

Farrel-Birmingham Company Holds Sales Conference

During the week of June 25 the sales force of Farrel-Birmingham Company, Inc., met at the company's offices at Ansonia, Con., for the annual sales conference. Sales representatives were present from New York, New Jersey, Buffalo, Pittsburgh, Akron, Chicago, and Los Angeles.

The conference opened with an address by President N. W. Pickering, in which he reviewed the business of the past year, the prospects for the ensuing year and discussed the NRA codes and their effects on sales.

The following sessions were devoted to discussions of the various products manufactured by the company, with particular relation to the sales problems involved; the latest developments were explained by the sales and engineering department heads, and an opportunity was afforded on Wednesday for an inspection of the machinery then being built in the shops.

During the week the men were entertained by golf, fishing and other diversions. A general golf tournament was held on Tuesday afternoon, followed by an informal dinner which was attended by 30 of the company's executives, engineers and salesmen.

New Movie Shows Construction Of Oil and Gas Pipe Lines

A new educational motion picture portraying the construction of arc welded oil and gas pipe lines is offered gratis for showing upon application to The Lincoln Electric Company, Cleveland, Ohio.

The new film, entitled "Shielded Arc Welding of Oil and Gas Lines," tells a graphic story of how pipe lines are built from the time the pipe arrives from the manufacturers through each successive step until completion. Procedure of firing line and bell hole welding is shown in detail. Operations on recent pipe line projects were photographed in order to illustrate the most up-to-date methods of construction.

EDWARD P. SPORE

Dayton Rubber Appoints Edward P. Spore District Representative

Dayton Rubber Manufacturing Company of Dayton, Ohio, announces the appointment of Edward P. Spore as district representative, to be in charge of distribution and sales of Dayton's complete line of V-belts and pulleys for all types of industrial service in the southwest. Mr. Spore has long been associated with the power transmission field in the southwest as representative of a leading transmission accessory manufacturer, and recently resigned from his former connection to take over his new activities with Dayton, effective July 1.

Republic Steel Appoints Knisely Advertising, Promotion Manager

Stanley A. Knisely, of Cleveland, has been appointed advertising and sales promotion manager of Republic Steel Corporation, with headquarters at Youngstown, Ohio. He succeeds L. S. Hamaker who was recently made vice president and general manager of Berger Manufacturing Company, Republic subsidiary, of Canton, Ohio.

Knisely entered newspaper work in his home city of Canton, Ohio, and later held the positions of city editor and telegraph editor of the Cleveland Plain Dealer. He left the newspaper field to become advertising and sales manager of the National Paving Brick Association, with headquarters in Cleveland. After six and a half years in this position, Knisely became director of advertising research for the National Association of Flat Rolled Steel Manufacturers and served seven years in this capacity.

CATALOGS BULLETINS

Helpful publications which manufacturers will be glad to send upon request

Boiler

Details of the design and construction of the Babcock & Wilcox Integral-Furnace Boiler, as well as operating characteristics of several installations are contained in a new 20-page fully-illustrated booklet recently released by The Babcok & Wilcox Company, 85 Liberty Street, New York, N. Y.

This new unit includes boiler, superheater, water-cooled furnace, and fuel burning and control equipment, and will utilize pulverized coal, oil, or gas fired singly or in any combination.

Asbestos Brake Linings

Scandinavia Belting Company, 248 Central Avenue, Newark, N. J., has published a four-page bulletin on its asbestos brake linings for which the manufacturer claims that it will not tear away from bolts, will not soften or spread under heat and pressure, wears down evenly throughout its life, has no plies to peel off, will not score true, smooth brake rims, will not smoke or burn and is cut to required length and curved to drum diameter if desired.

Drilling and Pumping Belts

Scandinavia Belting Company, 248 Central Avenue, Newark, N. J., has issued a four-page pamphlet on its oilfield drilling and pumping belts, which are made especially for the severe service encountered in the oil fields.

Supervisory Control

A new publication, entitled, Polaricode, Jr. Supervisory Control has recently been published by Westinghouse Electric and Manufacturing Company. The publication describes the application, distinctive features and operation of this low cost simplified supervisory control system. Especially applicable for small stations that do not justify the expense of higher cost systems, it is available in one size only and is limited to and equipped for a total of five selective, complete operations. It is ideal for the control of small hydro plants out on the creeks, oil line pumping stations, etc.

Gear Pumping Units

A new eight page illustrated circular, which shows for the first time the complete up-to-date line of Westinghouse gear drives for oil field service, entitled, Westinghouse Gear Units for Individual Oil Well Pumping Service, has been released by Westinghouse Electric and Manufacturing Company. In it are described the application, distinctive features, and specifications of the different types of units to meet the requirements of every type of well and for several methods of pumping.

Hoists

The Yale and Towne Manufacturing Company, Philadelphia Division, has issued a pamphlet which describes various uses of hoists manufactured by the company.

Squeaks *from the* BULL WHEEL

Murphy, a new cavalry recruit, was given one of the worst horses in the troop.

"Remember," said the instructor, "no one is allowed to dismount without orders."

The horse bucked and Murphy went over his head.

"Murphy," yelled the instructor, "did you have orders to dismount?"

"I did."

"From headquarters?"

"No, from hindquarters."

A young Irishman was a ward captain and his alderman gave a dinner to the faithful workers and their wives. The Irishman's wife was unable to accompany him and the following is the conversation which took place on his return home:

Wife: Was Mrs. Smith there?

Husband: Yes.

Wife: What kind of dress did she have on?

Husband: Well, really, I didn't notice.

Wife: Was Mrs. Martin there?

Husband: Oh, yes.

Wife: What did she have on?

Husband: I didn't notice.

Wife: Now, Mike, I don't think you went to the dinner at all.

Husband: Well, I'll tell you, dear; they had nothing on above the table and I was ashamed to look under.

"Oh, I'm so miserable. My husband has been out all the evening, and I haven't the faintest idea where he is."

"My dear, you mustn't worry. You'd probably be twice as miserable if you did know."

It happened in a little town in Ohio. A visiting Easterner stood on the veranda of a little hotel there, watching the sun go down in a splendor of purple and gold.

"By George!" he exclaimed to an impassive native lounging against a post, "That's a gorgeous sunset, isn't it?"

The native slanted his head a little and looked critically at the glowing west. "Not bad," he drawled. "Not bad for a little place like Hoopville."

"Did you hear about Myrtle's bad luck?"

"No; tell me."

"Right after she lost her job her boy friend breaks their engagement."

Mary: "If you please, ma'am, the cat's had chickens."

Mistress: "Nonsense, Mary; you mean kittens."

Mary: "Was them chickens or kittens you brought home this morning?"

Mistress: "Chickens, of course."

Mary: Well, mum, them's what the cat's had."

"What is the mortar board I hear mentioned so often?" asked the little girl.

"I'll try to explain," said Miss Cayenne, "although it is a slightly complicated matter. A mortar board carried by a builder often has cement on top, and worn by a college professor often has concrete under it."

Farmer—An' how's Lawyer Jones doin', doctor?

Doctor—Poor fellow, he's lying at death's door.

Farmer—That's grit for ye; at death's door, an' still lying.

The old Indian was riding along the road on his pony, while his squaw followed on foot, heavily burdened with luggage.

"Say, Redskin, why isn't your wife riding?" asked a passing motorist.

"Ugh," answered the Indian; "she got no pony."

Boy, standing on the corner, asked the driver of a new streamline car: "Which way are you going?"

"What difference is it to you?"

"Well, I just wanted to cross the street."

"Jack, dear," she murmured, "I hardly know how to tell you, but soon—soon—there will be a third in our little love nest."

"My darling," he cried, "are you certain?"

"Positive," she replied. "I had a letter from mother this afternoon, saying she would arrive next week."

Irate Caller: "You spoiled my article by a misprint."

Editor: "I'm very sorry. What did we get wrong?"

Caller: " A proverb I employed. You printed it, 'A word to the wife is sufficient.'"

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CASING
Perforator
Proven by Years of Efficient Use

SIMPLE IN OPERATION

The tool is run into the hole to the point where the perforation of the casing is desired. The Star Cutter is released through picking up on the drill stem. After this has been done the cutter moves into perforating position and punches the hole as each point of the star comes in contact with the casing, as long as the tool is being lowered in the well.

Picking back up of the drill stem causes the Star Cutter to recede inside of the body and remain in this position until the tool is again lowered, when punching of holes again takes place.

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TOOL COMPANY
HOUSTON — TEXAS

FOR SALE
·Equipment·

4-INCH LINE PIPE—SPECIAL—50,000-ft., good used 4-in., screw end line pipe. About 20,000-ft. ready for delivery now, balance will be ready within short time. Moving expense may be saved by buying this pipe at the original line location near Wichita Falls, Texas, before it is placed in pipe yards. This material is moving daily, but we can furnish up to approximately 10 miles or less yet. Contact Pampa Store, Phone 884; Wichita office, Phone LD-59; or any Bridgeport Sales Representative for details.

EXTRA QUALITY 6-INCH LINE PIPE—8,530-ft., the pick of a 12-mile line and practically the same as new. Now ready for delivery from line location near Burkburnett, Texas. Contact Ralph Hague, Phone 4-8580 Tulsa; or Wichita office, Phone LD-59.

SPECIAL PRICE—4-INCH LINE PIPE—We now have a special price on one lot, approximately 2,000-ft., of 4-in., 8thd, good quality line pipe in McPherson, Kansas yards. Phone McPherson 113, or Wichita office for price and details.

UNUSUAL VALUE—10-INCH CASING—2,491-ft., 45-lb. Lapweld, long collar, extra good quality; 3,097-ft., 45-lb. Seamless, long collar. In Wichita yards, but priced for delivery anywhere. Both lots bargains as compared to present market prices for similar quality used casing. Contact nearest Bridgeport Store for price.

GOOD USED KELLY—6-in. by 34-ft. Has new upper and lower connections and for all practical purposes is as good as new. Price $350 f. o. b. Wichita, Kansas.

COMPLETE LINE PUMPING UNIT—Almost new—used only 30 days—late type Fairbanks-Morse Power Pumping Unit, consisting of 10-h. p. direct connected enclosed gear, FM Engine: and 4x5-in., self-oiling, dust-tight, duplex FM Pump, mounted as one integral unit on steel skid base. Engine is low speed, heavy duty type designed for oil field work and operates on gasoline, kerosene, or natural gas. Pump is designed for long suction lines or high lift. Rated capacity 125 bbls. per hour. Weight of unit complete: 3,550-lbs. Priced at $850 f. o. b. Pampa.

BOILER FEED PUMPS—(1) 7-in. by 3-in by 8-in. "Snow" Boiler Feed Pump mounted on Steel Skids. This pump is guaranteed to be in good working condition. Price: $175 f. o. b. Houston Store.

RENT BRIDGEPORT ROTARY REAMERS—Any size may be used for 75 days or less at a minimum rental cost of from $60 to $150, plus cost of new cutters, the rental charge depending upon size and type of reamer required. For a small extra day charge the tool may be retained for an indefinite period. For complete information contact our nearest store.

BUTLER CASING ELEVATOR — 10-inch complete with 3-in. by 98-in. links, regular cementing bracket, and a set each of 9-in. O. D. and 9⅝-in. O. D. Slips. Elevator Bowl is 10¼-inches high. Slips are 12¾-inches long overall. This elevator has been overhauled, many new parts added and is in excellent working condition. Now in Oklahoma City Store.

FEED WATER HEATERS—Tulsa type, first class condition. Sizes 72x27½-in.; 72x22-in.; and 96x24-in. Used with drilling boilers to save water, pre-heat the boiler feed water and to purify boiler water. Will pay for themselves quickly where water is scarce or bad. Price: $100 each f. o. b. Oklahoma City.

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In acknowledging receipt of your letter of Feby. 8th, regarding the 1934 edition of your Oil Field and Pipe Line Equipment Catalog, I wish to thank you for same. I expect to refer to it frequently and feel that it is a definite addition to our office library.

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By [signature]
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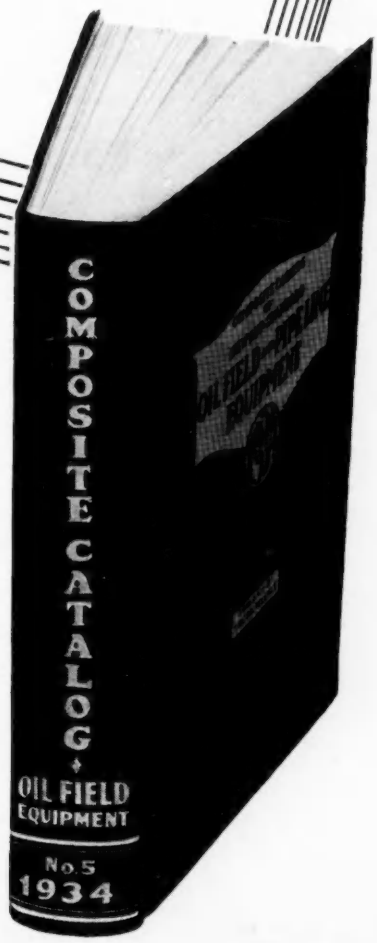

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